No.	Abstracts	Label	Base LED	Large LED	Base Centrum	Tuned LED	Tuned Centrum	Two-step
43	(1):	Despite its feasibility, self-	Rouge scores:	Rouge scores:	Rouge scores:	Rouge scores:	Rouge scores:	Rouge scores:
	We propose a self-supervised learning framework for visual odometry (VO)	supervised VO still	- Rouge 2:	- Rouge 2:	- Rouge 2:	- Rouge 2:	- Rouge 2:	- Rouge 2:
	that incorporates correlation of consecutive frames and takes advantage of	underperforms supervised ones.	0.0188 (prec)	0.0351 (prec)	0.0333 (prec)	0.0 (prec)	0.028 (prec)	0.0143 (prec)
	adversarial learning. Previous methods tackle self-supervised VO as a local	Apart from the effectiveness of	0.0361 (recall)	0.0482 (recall)	0.0602 (recall)	0.0 (recall)	0.0482 (recall)	0.012 (recall)
	structure from motion (SfM) problem that recovers depth from single image	direct supervision, a key reason is	0.0247 (f-1)	0.0406 (f-1)	0.0429 (f-1)	0.0 (f-1)	0.0354 (f-1)	0.012 (feath)
	and relative poses from image pairs by minimizing photometric loss between	that they focus mainly on	- Rouge L:	- Rouge L:	- Rouge L:	- Rouge L:	- Rouge L:	- Rouge L:
	warped and captured images. As single-view depth estimation is an ill-posed	geometric properties @cite but	0.1242 (prec)	0.1217 (prec)	0.0993 (prec)	0.1591 (prec)	0.0972 (prec)	0.1127 (prec)
	problem, and photometric loss is incapable of discriminating distortion	pay little attention to the	0.2381 (recall)	0.1667 (recall)	0.1786 (recall)	0.0833 (recall)	0.1667 (recall)	0.0952 (recall)
	artifacts of warped images, the estimated depth is vague and pose is	sequential nature of the problem.	0.1633 (f-1)	0.1407 (f-1)	0.1780 (fecall)	0.1094 (f-1)	0.1228 (f-1)	0.1032 (f-1)
	inaccurate. In contrast to previous methods, our framework learns a compact		, ,	Summary:	Summary:	Summary:	Summary:	Summary:
		In these methods, only a few	Summary:	·	1 -	•	<u> </u>	•
	representation of frame-to-frame correlation, which is updated by	frames (no more than 5) are	We propose a self-supervised	we present an unsupervised	"We present an unsupervised	In @cite, the authors proposed	@cite proposed an unsupervised	In @cite, a fully unsupervised
	incorporating sequential information. The updated representation is used for	processed in the network, while	learning framework for visual	learning framework for the task	learning framework for the task	an end-to-end learning	learning framework for the task	learning framework for
	depth estimation. Besides, we tackle VO as a self-supervised image generation	previous estimations are	odometry (VO) that incorporates	of monocular depth and camera	of monocular depth and camera	framework for monocular depth	of monocular depth and camera	monocular depth and camera
	task and take advantage of Generative Adversarial Networks (GAN). The	discarded and the current	correlation of consecutive	motion estimation from	motion estimation from	and camera motion estimation	motion estimation from	motion estimation from
	generator learns to estimate depth and pose to generate a warped target	estimation is made from scratch.	frames and takes advantage of	unstructured video sequences.	unstructured video sequences.	from unstructured video	unstructured video sequences.	unstructured video sequence
	image. The discriminator evaluates the quality of generated image with high-	Instead, the performance can be	adversarial learning. Previous	our method uses single-view	In common with recent work	sequences. In contrast to	Their method uses an end-to-	proposed. Unlike @cite and
	level structural perception that overcomes the problem of pixel-wise loss in	enhanced by taking geometric	methods tackle self-supervision	depth and multiview pose	[10, 14, 16], we use an end-to-	supervised methods, <mark>our</mark>	end learning approach with view	@cite which require only
	previous methods. Experiments on KITTI and Cityscapes datasets show that	relations of sequential	VO as a local structure from	networks, with a loss based on	end learning approach with view	framework learns to estimate	synthesis as the supervisory	monocular video sequences f
	our method obtains more accurate depth with details preserved and predicted	observations into account.	motion (SfM) problem that	warping nearby views to the	synthesis as the supervisory	depth and pose by minimizing	signal. In contrast to the	training, <mark>our method is</mark>
	pose outperforms state-of-the-art self-supervised methods significantly.		recovers depth from single	target using the computed	signal. In contrast to the	photometric loss between	previous methods, our method	completely unsupervised and
	(2):		image and relative poses from	depth and pose.	previous work, our method is	warped and captured images.	learns a compact representation	can be applied independently
	We present an unsupervised learning framework for the task of monocular		image pairs by minimizing	the generator learns to estimate	completely unsupervised,	Comment:	of frame-to-frame correlation,	test time. In addition, we do i
	depth and camera motion estimation from unstructured video sequences. In		photometric loss between	depth and pose to generate a	requiring only monocular video	- Contrasts 2 nd article's approach	which is updated by	rely on a single view as the
	common with recent work [10, 14, 16], we use an end-to-end learning		warped and captured images. As	warped target image.	sequences for training. Our	(green) with 1st article's	incorporating sequential	supervisory signal, and we are
	approach with view synthesis as the supervisory signal. In contrast to the		single-view depth estimation is	the discriminator evaluates the	method uses single-view depth	approach (yellow)	information. Besides, we tackle	able to train the camera in a
	previous work, our method is completely unsupervised, requiring only		an ill-posed problem, and	quality of generated image with	and multiview pose networks,	- Clear sign of MDS	VO as a self-supervised image	supervised manner.
	monocular video sequences for training. Our method uses single-view depth		photometric loss is incapable of	high-level structural perception	with a loss based on warping	- Words in red appeared in the	generation task and take	Comment:
	and multiview pose networks, with a loss based on warping nearby views to		discriminating distortion	that overcomes the problem of	nearby views to the target using	articles but cannot factuality	advantage of Generative	- Appears to contrast 2 nd art
	the target using the computed depth and pose. The networks are thus coupled		artifacts of warped images, the	pixel-wise loss in previous	the computed depth and pose.	cannot be verified based on	Adversarial Networks (GAN). The	(green) with the main one
	by the loss during training, but can be applied independently at test time.		estimated depth is vague and	methods.	The networks are thus coupled	inputs alone	generator learns to estimate	- But despite the paragr
	Empirical evaluation on the KITTI dataset demonstrates the effectiveness of		pose is inaccurate. In contrast to	_	by the loss during training, but		depth and pose to generate a	structure, the red part actu
	our approach: 1) monocular depth performs comparably with supervised		previous methods, our	Cityscapes datasets show that	can be applied independently at		warped target image. The	came from 2 nd article
	methods that use either ground-truth pose or depth for training, and 2) pose		framework learns a compact	our method obtains more	test time. Empirical evaluation		discriminator evaluates the	
	estimation performs favorably compared to established SLAM systems under		representation of frame-to-	accurate depth with details	on the KITTI dataset		quality of generated image with	
	comparable input settings.		frame correlation, which is		demonstrates the effectiveness		high-level structural perception	
	comparable input securitys.		updated by incorporating		of our approach: 1) monocular		that overcomes the problem of	
			sequential information. The		depth performs comparably with		pixel-wise loss in previous	
			updated representation is used		supervised methods that use		methods. Experiments on KITTI	
			for depth estimation. Besides,	Comment:	either ground-truth pose or		and Cityscapes datasets show	
					,			
			we tackle VO as a self-	- First section came from 2 nd	depth for training, and 2) pose		that our method obtains more	
			Supervised image generation	article, while parts in red came	estimation performs favorably		accurate depth with details	
			task and take advantage of	from the 1st article	compared to established SLAM		preserved and predicted pose	
			Generative Adversarial Networks	- No clear sign of MDS as the	systems under comparable input		outperforms state-of-the-art	
			(GAN). The generator learns to	text does not distinguish the	settings."		methods significantly.	
			estimate depth and pose to	sources	Comment:		Comment:	
			generate a warped target image.		- Copied from the second article		- Contrasts 2 nd article's approach	
			The discriminator evaluates the		only		(green) with 1st article's	
			quality of generated image		- No indication of MDS		approach (yellow)	
			Comment:		TO MICHOLIST OF WIDS		- Clear sign of MDS	
			- Copied the first tokens only				- No wrong or unverifiable facts,	
			- No indication of MDS				but copying quite a lot	
					1		1	

No.	Abstracts	Label	Base LED	Large LED	Base Centrum	Tuned LED	Tuned Centrum	Two-step
483	(1):	In a slightly different problem,	Rouge scores:	Rouge scores:	Rouge scores:	Rouge scores:	Rouge scores:	Rouge scores:
	This paper builds upon the current methods to increase their capability and automation for 3D surface construction from noisy and potentially sparse	where a NN is used to reconstruct the shape of a 3D object from its	- Rouge 2: 0.0643 (prec)	- Rouge 2: 0.0743 (prec)	- Rouge 2: 0.0505 (prec)	- Rouge 2: 0.082 (prec)	- Rouge 2: 0.0806 (prec)	- Rouge 2: 0.0843 (prec)
	point clouds. It presents an analysis of an artificial neural network surface	shading in a 2D @cite . show	0.0932 (recall)	0.0932 (recall)	0.0932 (recall)	0.0424 (recall)	0.0424 (recall)	0.0593 (recall)
	regression and mapping method, describing caveats, improvements and	from experiment that	0.0761 (f-1)	0.0827 (f-1)	0.0655 (f-1)	0.0559 (f-1)	0.0556 (f-1)	0.0697 (f-1)
	justification for the different approach.	quantitative improvement does	- Rouge L:	- Rouge L:	- Rouge L:	- Rouge L:	- Rouge L:	- Rouge L:
	(2): Shape-from-shading (SFS) methods tend to rely on models with few	not necessarily lead to quantitative improvement. This is	0.1337 (prec) 0.1933 (recall)	0.1409 (prec) 0.1765 (recall)	0.1187 (prec) 0.2185 (recall)	0.2581 (prec) 0.1345 (recall)	0.3016 (prec) 0.1597 (recall)	0.2143 (prec) 0.1513 (recall)
	parameters because these parameters need to be hand-tuned. This limits the	something to consider when	0.1581 (f-1)	0.1763 (fecall) 0.1567 (f-1)	0.1538 (f-1)	0.1768 (f-1)	0.2088 (f-1)	0.1773 (f-1)
	number of different cues that the SFS problem can exploit. In this paper, we	using a 'black box' function like a	Summary:	Summary:	Summary:	Summary:	Summary:	Summary:
	show how machine learning can be applied to an SFS model with a large	neural network, especially where	This paper builds upon the	this paper builds upon the	In this article, we're going to	In @cite <mark>, a hemisphere is</mark>	In @cite, the authors propose a	In @cite, an SFS model is used to
	number of parameters. Our system learns a set of weighting parameters that use the intensity of each pixel in the image to gauge the importance of that	there could be some information loss. In this regard we must	current methods to increase their capability and automation	current methods to increase their capability and automation	explain how machine learning can be applied to an artificial	rendered using a known illumination direction. The	method to learn a set of parameters that use the	learn the intensity of each pixel in the image. The intensity of the
	pixel in the shape reconstruction process. We show empirically that this leads	ensure that the final model is	for 3D surface construction from	for 3d surface construction from	neural network surface	isophotes in the resulting	intensity of each pixel in the	image is used as the input to the
	to a significant increase in the accuracy of the recovered surfaces. Our learning	representative of the ground	noisy and potentially sparse	noisy and potentially sparse	regression and mapping	reflectance map are then	image to gauge the importance	SFS model. The weights can also
	approach is novel in that the parameters are optimized with respect to actual	truth and not only rely on an	point clouds. It presents an	point clouds.	method, describing caveats,	modelled using Gaussian	of that pixel in the shape	be optimized for a particular
	surface output by the system. In the first, offline phase, a hemisphere is rendered using a known illumination direction. The isophotes in the resulting	error measure. It is suggested that more research must be done	analysis of an artificial neural network surface regression and	it presents an analysis of an artificial neural network surface	improvements and justification for the different approach. This	mixtures to obtain a parametric representation of the isophotes.	reconstruction process. They show empirically that this leads	input image. In this work, we show how machine learning can
	reflectance map are then modelled using Gaussian mixtures to obtain a	for 3D surface quality metrics	mapping method, describing	regression and mapping	paper builds upon the current	This is then used in the second	to a significant increase in the	be applied to a SFS model with a
	parametric representation of the isophotes. This Gaussian parameterization is	@cite . Visual quality will be	caveats, improvements and	method, describing caveats,	methods to increase their	phase to learn intensity-based	accuracy of the recovered	large number of parameters. We
	then used in the second phase to learn intensity-based weights using a	assessed in the method	justification for the different	improvements and justification	capability and automation for 3D	weights using a database of 3D	surface. The weights can also be	also show how the weighting
	database of 3D shapes. The weights can also be optimized for a particular input image.	presented here alongside quantitative results in the	approach. Shape-from- shading (SFS) methods tend to	for the different approach. shape-from-shading (sf)	surface construction from noisy and potentially sparse point	shapes. The weights can also be optimized for a particular input	optimized for a particular input image.	parameters can be used to learn intensity-based weights using a
	input image.	absence of quality metrics.	rely on models with few	methods tend to rely on models	clouds. It presents an analysis of	image.	Comment:	database of 3D shapes.
		, ,	parameters because these	with few parameters because	an artificial Neural Network	Comment:	- Summarized the 2 nd article	Comment:
			parameters need to be hand-	these parameters need to be	surface regression and mapped	- Summarized the 2 nd article	only	- Summarized the 2 nd article
			tuned. This limits the number of different cues that the SFS	hand-tuned. this limits the number of	method, describing caveat, improvements, and justification	only - The first article is probably too	- The first article is probably too short to provide sufficient	only - The first article is probably too
			problem can exploit. In this	different cues that the sf	for a different approach. In this	short to provide sufficient	inputs?	short to provide sufficient
			paper, we show how machine	problem can exploit. in this	paper, we show how machine	inputs?	- Weak indication of MDS	inputs?
			learning can be applied to an SFS	paper	learning is applied to an SFS	- Weak indication of MDS		- Weak indication of MDS
			model with a large number of parameters. Our system learns a	, we show how machine learning can be applied to an sf model	model with a large number of parameters. Our system learns a			
			set of weighting parameters that	with a large number of	set of weighting parameters that			
			use the intensity of each pixel in	parameters.	use the intensity of each pixel in			
			the image to gauge the	our system learns a set of	the image to gauge the			
			importance of that pixel in the shape reconstruction process.	weighting parameters that use the intensity of each pixel in the	importance of that pixel in the shape reconstruction process.			
			We show empirically that this	image to gauge the importance	We show that this leads to a			
			leads to a significant increase in	of that pixel in the shape	significant increase in the			
			the accuracy of the recovered	reconstruction process.	accuracy of the recovered			
			surfaces. Our learning approach is novel in that the parameters	we show empirically that this leads to a significant increase in	surfaces. Our learning approach is novel in that the parameters			
			are optimized with respect to	the accuracy of the recovered	are optimized with respect to			
			actual surface output by the	surfaces.	actual surface output by the			
			system. In the first	Comment:	system. In the first, offline			
			Comment: - Copied the first tokens only	 Copied the first tokens only, and even with errors (red) 	phase, a hemisphere is rendered using a known illumination			
			- No indication of MDS	- No indication of MDS	direction. The isophotes in the			
					resulting reflectance map are			
					then modelled using Gaussian			
					mixtures to obtain a parametric representation of the isophotes.			
					This Gaussian parameterization			
					is then used in the second phase			
					to learn intensity-based weights			
					using a database Comment:			
					- Initial parts shows some			
					contrasts between 1st (green)			
					and 2 nd yellow articles			
					 Some sign of MDS, but goes on to just copy everything else 			
					from 2 nd article (red)			
-	·	-	·		-		· ·	-

No.	Abstracts	Label	Base LED	Large LED	Base Centrum	Tuned LED	Tuned Centrum	Two-step
556	(1):	Researchers have examined the	Rouge scores:	Rouge scores:	Rouge scores:	Rouge scores:	Rouge scores:	Rouge scores:
330	In a disaster situation, first responders need to quickly acquire situational	question of whether Twitter can	- Rouge 2:	- Rouge 2:	- Rouge 2:	- Rouge 2:	- Rouge 2:	- Rouge 2:
	awareness and prioritize response based on the need, resources available and		0.0419 (prec)	0.049 (prec)	0.0625 (prec)	0.0431 (prec)	0.0536 (prec)	0.0111 (prec)
	impact. Can they do this based on digital media such as Twitter alone, or	replace newswire for breaking news @cite . They studied a	0.0583 (recall)	0.049 (prec) 0.0417 (recall)	0.0833 (recall)	0.0431 (prec) 0.0417 (recall)	0.05 (prec)	0.0111 (prec) 0.0083 (recall)
	newswire alone, or some combination of the two? We examine this question	period of 77 days in 2011 during	0.0488 (f-1)	0.0417 (fecall) 0.045 (f-1)	0.0714 (f-1)	0.0417 (fecan) 0.0424 (f-1)	0.05 (recail) 0.0517 (f-1)	0.0085 (fecall) 0.0095 (f-1)
	· ·	, ,	, ,	' '	1 1	1	, ,	, ,
	in the context of the 2015 Nepal Earthquakes. Because newswire articles are	which 27 events occurred. The	- Rouge L:	- Rouge L:	- Rouge L: 0.1366 (prec)	- Rouge L:	- Rouge L:	- Rouge L:
	longer, effective summaries can be helpful in saving time yet giving key	biggest disasters in this event-set	0.1548 (prec)	0.1845 (prec)	, ,	0.1709 (prec)	0.177 (prec)	0.1868 (prec)
	content. We evaluate the effectiveness of several unsupervised summarization	are: an airplane crash with 43	0.2149 (recall)	0.157 (recall)	0.1818 (recall)	0.1653 (recall)	0.1653 (recall)	0.1405 (recall)
	techniques in capturing key content. We propose a method to link tweets	deaths, and a magnitude 5.8	0.1799 (f-1)	0.1696 (f-1)	0.156 (f-1)	0.1681 (f-1)	0.1709 (f-1)	0.1604 (f-1)
	written by the public and newswire articles, so that we can compare their key	earthquake in Virginia that	Summary:	Summary:	Summary:	Summary:	Summary:	Summary:
	characteristics: timeliness, whether tweets appear earlier than their	caused infrastructural damage.	In a disaster situation, first	in a disaster situation, first	Twitter has become a useful	The authors of @cite study the	@cite examined the extent to	In <u>@cite</u> , the authors found that
	corresponding news articles, and content. A novel idea is to view relevant	None of these disasters, bad as	responders need to quickly	responders need to quickly	source of real-time news,	extent to which news reporting	which news reporting in	newswire providers report the
	tweets as a summary of the matching news article and evaluate these	they are, rise to the level of the	acquire situational awareness	acquire situational awareness	potentially replacing newswire	in newswire and Twitter overlap	newswire and Twitter overlap	same events as newswire
	summaries. Whenever possible, we present both quantitative and qualitative	Nepal Earthquake(s) of 2015 in	and prioritize response based on	and prioritize response based on	for this purpose. But is this true?	and whether Twitter often	and whether Twitter reports	providers, in addition to a long
	evaluations. One of our main findings is that tweets and newswire articles	which almost 10,000 lives were	the need, resources available	the need, resources available	In this paper, we examine the	reports news faster than	news faster than traditional	tail of minor events ignored by
	provide complementary perspectives that form a holistic view of the disaster	lost. They collected a large	and impact. Can they do this	and impact.	extent to which news reporting	traditional newswire providers.	newswire providers. They	mainstream media. However,
	<mark>situation</mark> .	dataset of tweets and news	based on digital media such as	can they do this based on digital	in newswire and Twitter overlap	They analyse 77 days worth of	analysed 77 days worth of tweet	they found that Twitter does not
	(2):	articles, but then eliminated a	Twitter alone, or newswire	media such as Twitter alone, or	and whether Twitter often	tweet and newswire articles	and newswire articles with	report the same event as
	Twitter is often considered to be a useful source of real-time news, potentially	large collection of tweets based	alone, or some combination of	newswire alone, or some	reports news faster than	with respect to both manually	respect to both manually	newswire, which suggests that
	replacing newswire for this purpose. But is this true? In this paper, we examine	on clustering. More elimination of	the two? We examine this	combination of the two?	traditional newswire providers.	identified major news events	identified major news events	the importance of news
	the extent to which news reporting in newswire and Twitter overlap and	tweets led to only 97 linked	question in the context of the	we examine this question in the	In particular, we analyse <mark>77 days</mark>	and larger volumes of	and larger volumes of	reporting in a newswire setting
	whether Twitter often reports news faster than traditional newswire providers.	tweet-news article pairs, which is	2015 Nepal Earthquakes.	context of the 2015 Nepal	worth of tweet and newswire	automatically identified news	automatically identified news	comes from increased event
	In particular, we analyse 77 days worth of tweet and newswire articles with	a small dataset.	Because newswire articles are	Earthquakes.	articles with respect to both	events. Their results indicate	events. Their results indicate	coverage, not timeliness of
	respect to both manually identified major news events and larger volumes of		longer, effective summaries can	we propose a method to link	manually identified major news	that Twitter reports the same	that Twitter reports the same	reporting. The authors conclude
	automatically identified news events. Our results indicate that Twitter reports		be helpful in saving time yet	tweets written by the public and	events and larger volumes of	events as newswire providers, in	events as newswire providers, in	that Twitter is a useful source of
	the same events as newswire providers, in addition to a long tail of minor		giving key content. We evaluate	newswire articles, so that we	automatically identified news	addition to a long tail of minor	addition to a long tail of minor	real-time news, but it is not clear
	events ignored by mainstream media. However, contrary to popular belief,		the effectiveness of several	can compare their key	events. Our results indicate that	events ignored by mainstream	events ignored by mainstream	whether this is the case for both
	neither stream leads the other when dealing with major news events,		unsupervised summarization	characteristics: timeliness,	Twitter reports the same events	media. However, contrary to	media. However, contrary to	newswire and newswire
	indicating that the value that Twitter can bring in a news setting comes		techniques in capturing key	whether tweets appear earlier	as newswire providers, in	popular belief, neither stream	popular belief, neither stream	providers <mark>.</mark>
	predominantly from increased event coverage, not timeliness of reporting.		content.We propose a method	than their corresponding news	addition to a long tail of minor	leads the other when dealing	leads the other when dealing	Comment:
			to link tweets written by the	articles, and content. we	events ignored by mainstream	with major news events,	with major news events,	- Weak indication of MDS, with
			public and newswire articles, so	evaluate the effectiveness of	media. However, contrary to	indicating that the value that	indicating that the value that	the 2 nd article presented as no
			that we can compare their key	several unsupervised	popular belief, neither stream	Twitter can bring in a news	Twitter can bring in a news	the main article
			characteristics: timeliness,	summarization techniques in	leads the other when dealing	setting comes predominantly	setting comes predominantly	- The first red part is factually
			whether tweets appear earlier	capturing key content.	with major news events,	from increased event coverage,	from increased event coverage,	wrong, while the second part is
			than their corresponding news	Comment:	indicating that the value that	not timeliness of reporting.	not timeliness of reporting.	not implied from the inputs
			articles, and content. A novel	- Copied from the first article	Twitter can bring in a news	Comment:	Comment:	
			idea is to view relevant tweets	only but with a reordering of	setting comes predominantly	- All parts are from 2 nd article	- Essentially the same as Tuned	
			as a summary of the matching	two sentences (red)	from increased event coverage,	- However, it is represented as a	LED, except for the initial	
			news article and evaluate these	- No indication of MDS	not timeliness of reporting. One	separate article from the main	words	
			summaries. Whenever possible,		of our main findings is that	one, i.e. weak indication of	- Weak indication of MDS	
			we present both quantitative		tweets and newswire provide	MDS	Weak maleacien of mige	
			and qualitative evaluations. One		complementary perspectives	11123		
			of our main findings is that		that form a holistic view of the			
			tweets and newswire are		disaster situation.			
			complementary perspectives		Comment:			
			that form a holistic view of		- Except for the last sentence			
			and form a nonstit view of		(yellow), all parts are from 2 nd			
					article with some paraphrasing			
					- Summary presented the			
					studies as the same one, i.e.			
					no indication of MDS			

No.	Abstracts	Label	Base LED	Large LED	Base Centrum	Tuned LED	Tuned Centrum	Two-step
599	(1):	Our work is related to Zipf's law	Rouge scores:	Rouge scores:	Rouge scores:	Rouge scores:	Rouge scores:	Rouge scores:
	This paper presents a discovery that the length of the entities in various	and the distributions of word	- Rouge 2:	- Rouge 2:	- Rouge 2:	- Rouge 2:	- Rouge 2:	- Rouge 2:
	datasets follows a family of scale-free power law distributions. The concept of	length and sentence length.	0.0402 (prec)	0.0127 (prec)	0.0315 (prec)	0.0175 (prec)	0.0093 (prec)	0.0122 (prec)
	entity here broadly includes the named entity, entity mention, time	Power laws have been observed	0.1892 (recall)	0.0541 (recall)	0.1892 (recall)	0.027 (recall)	0.027 (recall)	0.027 (recall)
	expression, aspect term, and domain-specific entity that are well investigated	to appear in numerous natural	0.0664 (f-1)	0.0206 (f-1)	0.0541 (f-1)	0.0213 (f-1)	0.0138 (f-1)	0.0168 (f-1)
	in natural language processing and related areas. The entity length denotes	and man-made systems @cite,	- Rouge L:	- Rouge L:	- Rouge L:	- Rouge L:	- Rouge L:	- Rouge L:
	the number of words in an entity. The power law distributions in entity length	we here concern them in	0.0914 (prec)	0.0759 (prec)	0.0762 (prec)	0.1034 (prec)	0.0826 (prec)	0.0723 (prec)
	possess the scale-free property and have well-defined means and finite	language.	0.4211 (recall)	0.3158 (recall)	0.4474 (recall)	0.1579 (recall)	0.2368 (recall)	0.1579 (recall)
	variances. We explain the phenomenon of power laws in entity length by the		0.1502 (f-1)	0.1224 (f-1)	0.1303 (f-1)	0.125 (f-1)	0.1224 (f-1)	0.0992 (f-1)
	principle of least effort in communication and the preferential mechanism.(2):		Summary: This paper presents a discovery	Summary:	Summary: Power-law distributions occur in	Summary: In @cite, the authors present a	Summary:	Summary:
	Power-law distributions occur in many situations of scientific interest and have		This paper presents a discovery that the length of the entities in	this paper presents a discovery that the length of the entities in	many situations of scientific	principled statistical framework	@cite present a statistical framework for discerning and	In <u>@cite</u> , the authors present a statistical framework for
	significant consequences for our understanding of natural and man-made		various datasets follows a family	various datasets follows a family	interest and have significant	for discerning and quantifying	quantifying power law behavior	discerning and quantifying
	phenomena. Unfortunately, the detection and characterization of power laws		of scale-free power law	of scale-free power law	consequences for our	power-law distribution in	in empirical data. Their approach	power-law distributions. The
	is complicated by the large fluctuations that occur in the tail of the distribution		distributions. The concept of	distributions.	understanding of natural and	empirical data. The authors	combines maximum-likelihood	authors present a method that
	—the part of the distribution representing large but rare events—and by the		entity here broadly includes the	the power law distributions in	man-made phenomena.	present a method for discerning	fitting methods with goodness-	combines maximum-likelihood
	difficulty of identifying the range over which power-law behavior holds.		named entity, entity mention,	entity length possess the scale-	Unfortunately, the detection and	power-law distributions based	of-fit tests based on the	fitting with the Kolmogorov-
	Commonly used methods for analyzing power-law data, such as least-squares		time expression, aspect term,	free property and have well-	characterization of power laws is	on the Kolmogorov-Smirnov (KS)	Kolmogorov-Smirnov (KS)	Smirnov (KS) statistic and
	fitting, can produce substantially inaccurate estimates of parameters for		and domain-specific entity that	defined means and finite	complicated by the large	statistic and likelihood ratios.	statistic and likelihood ratios.	likelihood ratios. The authors
	power-law distributions, and even in cases where such methods return		are well investigated in natural	variances.	fluctuations that occur in the tail	They evaluate the effectiveness	They evaluate the effectiveness	demonstrate that their method
	accurate answers they are still unsatisfactory because they give no indication		language processing and related	we explain the phenomenon of	of the distribution—the part of	of the approach with tests on	of the approach with tests on	can be used with synthetic data
	of whether the data obey a power law at all. Here we present a principled		areas. The entity length denotes	power laws in entity length by	the distribution representing	synthetic data and give critical	synthetic data and give critical	and give critical comparisons to
	statistical framework for discerning and quantifying power-law behavior in empirical data. Our approach combines maximum-likelihood fitting methods		the number of words in an entity. The power law	the principle of least effort in communication and the	large but rare events—and by the difficulty of identifying the	comparisons to previous	comparisons to previous approaches. They also apply the	previous approaches. However, the authors do not provide a
	with goodness-of-fit tests based on the Kolmogorov-Smirnov (KS) statistic and		distributions in entity length	preferential mechanism.	range over which power-law	approaches. Comment:	proposed methods to twenty-	quantitative comparison of their
	likelihood ratios. We evaluate the effectiveness of the approach with tests on		possess the scale-free property	our approach combines	behavior holds. This paper	- All parts are from 2 nd article	four real-world data sets from a	method with the KKS method.
	synthetic data and give critical comparisons to previous approaches. We also		and have well-defined means	maximum-likelihood fitting	presents a discovery that the	- However, it is represented as a	range of different disciplines,	and they do not provide an
	apply the proposed methods to twenty-four real-world data sets from a range		and finite variances. We explain	methods with goodness-of-fit	length of the entities in various	separate article from the main	each of which has been	empirical comparison of their
	of different disciplines, each of which has been conjectured to follow a power-		the phenomenon of power laws	tests based on the Kolmogorov-	datasets follows a family of	one, i.e. weak indication of	conjectured to follow a power	results with KKS methods.
	law distribution. In some cases we find these conjectures to be consistent with		in entity length by the principle	Smirnov (KS) statistic and	scale-free power law	MDS	law distribution. In some cases	Comment:
	the data, while in others the power law is ruled out.		of least effort in communication	likelihood ratios.	distributions. The concept of		they find these conjectures to be	- All parts are from 2 nd article.
			and the preferential	we evaluate the effectiveness of	entity here broadly includes the		consistent with the data, while	Similar to the other tuned
			mechanism. Power-law	the approach with tests on	named entity, entity mention,		in others the power law is ruled out.	models
			distributions occur in many situations of scientific interest	synthetic data and give critical comparisons to previous	time expression, aspect term, and domain-specific entity that		Comment:	 Red part contains hallucinated information
			and have significant	approaches.	are well investigated in natural		- All parts are from 2 nd article.	mormation
			consequences for our	finally, we apply the proposed	language processing and related		Similar but longer than Tuned	
			understanding of natural and	methods to twenty-four real-	areas. The entity length denotes		LED model	
			man-made phenomena.	world data sets from a range of	the number of words in an		- However, it is represented as a	
			Unfortunately, the detection and	different disciplines, each of	entity. The power law		separate article from the main	
			characterization of power laws is	which has been conjectured to	distributions in entity length		one, i.e. weak indication of	
			complicated by the large	follow a power-law distribution.	possess the scale-free property		MDS	
			fluctuations that occur in the tail	in some cases we find these	and have well-defined means			
			of the distribution—the part of	conjectures to be consistent	and finite variances. We explain			
			the distribution representing large but rare events—and by	with the data, while in others the power law is ruled	in entity length by the principle			
			the difficulty of identifying the	Comment:	of least effort in communication			
			range over which power-law	- First section came from 1st	and the preferential mechanism.			
			behavior		Power-law distributions are not			
			Comment:	article, while parts in red came from the 2 nd article	limited to natural phenomena.			
			- Copied the first tokens only	- No clear sign of MDS as the	They can also be found in man-			
			- No indication of MDS	text does not distinguish the	made phenomenon, such as			
				sources	man-made climate change, and			
					in natural history, such as			
					natural gas and other natural			
					phenomena. However, they can be difficult to detect due to the			
					large			
					Comment:			
					- Only the 1st article (yellow)			
					used in describing the study, while 2 nd article (green) only			
					used to provide general			
					context			
					 Red part is also from 2nd article 			
					and somehow appeared again			
					despite the idea is also			
					covered in the green part			
					- No clear sign of MDS			
-		-	· · · · · · · · · · · · · · · · · · ·		· -		·	

No.	Abstracts	Label	Base LED	Large LED	Base Centrum	Tuned LED	Tuned Centrum	Two-step
620	(1):	The improved methods that we	Rouge scores:	Rouge scores:	Rouge scores:	Rouge scores:	Rouge scores:	Rouge scores:
	In this work we investigate the reasons why Batch Normalization (BN)	propose are also closely related	- Rouge 2:	- Rouge 2:	- Rouge 2:	- Rouge 2:	- Rouge 2:	- Rouge 2:
	improves the generalization performance of deep networks. We argue that	to <mark>variational drop -out</mark> @cite as	0.0068 (prec)	0.0351 (prec)	0.022 (prec)	0.0156 (prec)	0.0 (prec)	0.0 (prec)
	one major reason, distinguishing it from data-independent normalization	discussed below. We give a new	0.0303 (recall)	0.0606 (recall)	0.1212 (recall)	0.0303 (recall)	0.0 (recall)	0.0 (recall)
	methods, is randomness of batch statistics. This randomness appears in the	interpretation to variational	0.0111 (f-1)	0.0444 (f-1)	0.0372 (f-1)	0.0206 (f-1)	0.0 (f-1)	0.0 (f-1)
	parameters rather than in activations and admits an interpretation as a	dropout and apply it in	- Rouge L:	- Rouge L:	- Rouge L:	- Rouge L:	- Rouge L:	- Rouge L:
	practical Bayesian learning. We apply this idea to other (deterministic)	combination with normalization	0.0676 (prec)	0.1207 (prec)	0.0601 (prec)	0.0923 (prec)	0.1042 (prec)	0.0795 (prec)
	normalization techniques that are oblivious to the batch size. We show that	techniques.	0.2941 (recall)	0.2059 (recall)	0.3235 (recall)	0.1765 (recall)	0.1471 (recall)	0.2059 (recall)
	their generalization performance can be improved significantly by Bayesian		0.1099 (f-1)	0.1522 (f-1)	0.1014 (f-1)	0.1212 (f-1)	0.122 (f-1)	0.1148 (f-1)
	learning of the same form. We obtain test performance comparable to BN and, at the same time, better validation losses suitable for subsequent output		Summary: In this work we investigate the	Summary: we investigate a local	Summary: In this article, we investigate the	Summary: In @cite, the authors propose a	Summary:	Summary: In @cite, a local
	uncertainty estimation through approximate Bayesian posterior.		reasons why Batch	reparameterizaton technique for	reasons why Batch	local reparameterization that	In @cite, a local reparameterization is used to	reparameterization is used to
	(2):		Normalization (BN) improves the	greatly reducing the variance of	Normalization (BN) improves the	translates uncertainty about	reduce the variance of stochastic	reduce the variance of stochastic
	We investigate a local reparameterizaton technique for greatly reducing the		generalization performance of	stochastic gradients for	generalization performance of	global parameters into local	gradients for variational	gradients for variational
	variance of stochastic gradients for variational Bayesian inference (SGVB) of a		deep networks. We argue that	variational bayesian inference	deep networks. We argue that	noise that is independent across	Bayesian inference (SGVB) of a	Bayesian inference (SGVB) of a
	posterior over model parameters, while retaining parallelizability. This local		one major reason, distinguishing	(SGVB) of a posterior over	one major reason, distinguishing	datapoints in the minibatch. The	posterior over model	posterior over model
	reparameterization translates uncertainty about global parameters into local		it from data-independent	model parameters, while	it from data-independent	authors show that this method	parameters, while retaining	parameters, while retaining
	noise that is independent across datapoints in the minibatch. Such		normalization methods, is	retaining parallelizability.	normalization methods, is	can be improved significantly by	parallelizability. This method	parallelizability. <mark>In contrast, our</mark>
	parameterizations can be trivially parallelized and have variance that is		randomness of batch statistics.	our method allows inference of	randomness of batch statistics.	Bayesian learning of the same	allows inference of more flexibly	method does not require
	inversely proportional to the mini-batch size, generally leading to much faster		This randomness appears in the	more flexibly parameterized	This randomness appears in the	form. In @cite the authors	parameterized posteriors;	parallelizability, and we do not
	convergence. Additionally, we explore a connection with dropout: Gaussian		parameters rather than in	posteriors ; specifically, we	parameters rather than in	propose variational dropout, a	specifically, the dropout rates	need parallelizability in our
	dropout objectives correspond to SGVB with local reparameterization, a scale-		activations and admits an	propose variational dropout, a	activations and admits an	generalization of Gaussian	are learned, often leading to	method, which is a key
	invariant prior and proportionally fixed posterior variance. Our method allows inference of more flexibly parameterized posteriors; specifically, we propose		interpretation as a practical	generalization of gaussian dropout where the dropout	interpretation as a practical	dropout where the dropout	better models. Comment:	advantage of SGVB over SGVB. In addition, our method can be
	variational dropout, a generalization of Gaussian dropout where the dropout		Bayesian learning. We apply this idea to other (deterministic)	rates are learned, often leading	Bayesian learning. We apply this idea to other (deterogeneous)	rates are learned, often leading to better models.	- All parts are from 2 nd article.	seen as a generalization of SGVB
	rates are learned, often leading to better models. The method is demonstrated		normalization techniques that	to better models.	normalization techniques that	Comment:	- However, it is represented as a	where the dropout rates are
	through several experiments.		are oblivious to the batch size.	Comment:	are oblivious to the batch size.	- Summarizes the 1st (yellow),	separate article from the main	learned, often leading to better
			We show that their	- Copied only from the 2 nd	We show that their	and then the 2 nd (green) article	one, i.e. weak indication of	models, and the variance is
			generalization performance can		generalization performance can	- Shows signs of MDS, but	MDS	inversely proportional to the
			be improved significantly by	article, specifically the first and penultimate sentences.	be improved significantly by	factuality is a concern since the		mini-batch size.
			Bayesian learning of the same	- No sign of MDS	Bayesian learning of the same	red part is actually from the		Comment:
			form. We obtain test		form. We obtain test	2 nd article		- Contains mostly information
			performance comparable to BN	- Errors introduced quite	paritiment to mparitime to an			from the 2 nd model (green)
			and, at the same time, better validation losses suitable for	randomly (red)	and, at the same time, better validation losses suitable for			 However, it pretends to be doing an MDS (red) though the
			subsequent output uncertainty		subsequent output uncertainty			information is not directly
			estimation through approximate		estimation through approximate			implied and contains logical
			Bayesian posterior. We		Bayesian posterior. Additionally,			inconsistencies ("key
			investigate a local		we explore a connection with			advantage of SGVB over
			reparameterizaton technique for		dropout: Gaussian dropout			SGVB")
			greatly reducing the variance of		objectives correspond to SGVB			
			stochastic gradients for		with local reparameterization, a			
			variational Bayesian inference		scale-invariant prior and			
			(SGVB) of a posterior over model		proportionally fixed posterior			
			parameters, while retaining parallelizability. Our method		variance. Our method allows inference of more flexibly			
			allows inference of a		parameterized posteriors;			
			generalization		specifically, we propose			
			Comment:		variational dropout, a			
			- Copied the first tokens only		generalization of Gaussian drop			
			- No indication of MDS		out where the dropout rates are			
					learned, often leading to better			
					models. The method is			
					demonstrated through several			
					experiments. The Method is			
					demonstrated through multiple experiments.			
					Comment:			
					- Initial parts copied from the 1st			
					article (yellow), followed by			
					copying from the 2 nd article			
					(green)No sign of MDS as the two are			
					presented as concerning the			
					same study			
					- A made-up word is randomly			
					introduced for no apparent			
					reason (red)			
_						·		

Calcard Company of the first	No.	Ва	Abstracts Label	Base LED Large I	LED Base Centrui	m Tuned LED	Tuned Centrum	Two-step
have yelded pretty strong performance in all of these examined tasks. This local detection a proach for named entity asproach for named entity approach for named entity asproach for named entity approach for named entity appro	-	buge scores: touge 2: 0316 (prec) 0463 (recall 0376 (f-1) touge L: 1132 (prec) 1651 (recall 1343 (f-1) this paper, v proach for r cognition (N tection in n ocessing. In: ER as a sequ oblem, we p cal detection ly on the rec dinally forge OFE) metho ch sentence ft right conto the represent simple feedf etwork is use edict entity dividual frag oposed met aluated in s d mention o cluding the o sk and TAC-I titty Discove DL) tasks. Oi elded pretty elformance i amined task tection app any advanta ditional sec ethods. iffied neural chitecture a gorithm that rious natura ocessing mment: Copied the fi	[1]: In this paper, we study a novel approach for named entity recognition (NER) and mention detection in natural language processing, instead of treating NER as a sequence labelling problem, we propose a new local detection approach, which rely on the recent hixed-size ordinally forgetting encoding (FOFE) method to fully encode each sentence fragment and its left right contexts into a fixed-size representation. Afterwards, a simple feedforward neural network is used to reject or predict entity label for each individual fragment. The proposed method has been evaluated in several popular NER and mention detection tasks, including the CoNLL 2003 NER task and TAC-KBP2015 and TAC-KBP2015 Tri-lingual Entity Discovery and Linking (EDL) tasks. Our methods have yielded pretty strong performance in all of these examined tasks. This local detection approach has shown many advantages over the traditional sequence labelling methods. (2): We propose a unified neural network architecture and learning algorithm that can be applied to various natural language processing tasks including: narton speech leging, chunking, named entity recognition, and semantic role labelling methods. (2): We propose a unified neural network architecture and learning algorithm that can be applied to various natural language processing tasks including: narton semande input features carefully optimized for each task, gur system learns internal representations on the basis of vast amounts of mostly unlabeled training data. This work is then used as a basis for building a freely available tagging system with good performance and minimal computational requirements. (3): The recently introduced continuous Skip-gram model is an efficient method for learning high-quality distributed vector representations. We also describe a simple alternative to the hierarchical softmax called negative sampling, An inherent limitation of word representations. We also describe a simple alternative to the hierarchical softmax called negative sampling, An inherent limi	Rouge scores: Rouge 2: 0.0316 (prec) 0.0463 (recall) 0.0376 (f-1) Rouge L: 0.1132 (prec) 0.1651 (recall) 0.1343 (f-1) Summary: In this paper, we study a novel approach for named entity ecognition (NER) and mention detection in natural language processing. Instead of treating detection approach, which ely on the recent fixed-size ordinally forgetting encoding FOFE) method to fully encode each sentence fragment and itself right contexts into a fixed-size representation. Afterwards, a simple feedforward neural network is used to reject or predict entity label for each individual fragment. The proposed method has been evaluated in several popular NER and mention detection tasks, including the CoNLL 2003 NER and the CoNLL 2003 NER and the context in the proposed method to fully encode exact and the context in the proposed method to fully encode in the proposed method has been evaluated in several popular NER and mention detection tasks, including the CoNLL 2003 NER and the context in the proposed method to fully encode in the proposed method in several popular NER and mention detection tasks, including the CoNLL 2003 NER and the proposed method in several popular NER included pretty strong performance in all of these examined tasks. This local detection approach has shown many advantages over the raditional sequence labelling methods.	Rouge scores: - Rouge 2: 0.035 (prec) 0.0648 (recall) 0.0455 (f-1) - Rouge L: 0.1045 (prec) 0.1927 (recall) 0.1355 (f-1) Summary: In this paper, we study approach for named erecognition (NER) and detection in natural laprocessing. Instead of NER as a sequence lab problem, we propose local detection approach of the problem, we propose local detection approached to a fixed-size or	Rouge scores: - Rouge 2: 0.0685 (prec) 0.0463 (recall) 0.0552 (f-1) - Rouge L: 0.1757 (prec) 0.1193 (recall) 0.1421 (f-1) Summary: In @cite, the authors projunitied neural network architecture and learning algorithm that can be approcessing tasks including anew architecture and learning algorithm that can be approcessing tasks including architecture and learning algorithm that can be approcessing tasks including architecture and learning algorithm that can be approcessing tasks including architecture and learning algorithm that can be approcessing tasks including architecture and learning algorithm that can be approcessing tasks including architecture and learning algorithm that can be approcessing tasks including afforts. The coding of speech tagging, chunking and that the following in the fo	Rouge scores: - Rouge 2: 0.0 (prec) 0.0 (recall) 0.0 (f-1) - Rouge L: 0.1957 (prec) 0.0826 (recall) 0.1161 (f-1) Summary: The Skip-gram model @cite @cite is an efficient method for learning high-quality distributed vector representations that capture a large number of precise syntactic and semantic word relationships. By subsampling of the frequent words, it obtain significant speedup and also learn more regular word representations. Comment: - Shows weak signs of MDS, providing a summary of the 3rd article only (blue) and presenting it as different from the main one.	Rouge scores: - Rouge 2: 0.049 (prec) 0.0463 (recall) 0.0476 (f-1) - Rouge L: 0.1942 (prec) 0.1835 (recall) 0.1887 (f-1) Summary: In @cite, the authors proposed a unified neural network architecture and learning algorithm that can be applied to various natural language processing tasks including part-of-speech tagging, chunking, named entity recognition, and semantic role labeling. However, unlike our work, they do not use a deep neural network to train their system. Instead, they use a multi-task learning algorithm to train their network on a large amount of unlabeled training data. In contrast, we use a deep network to train our system on a much larger amount of training data, and we do not need to train our network on unlabeled data. Comment: - Shows signs of MDS, providing a summary of the 2 nd article (green) and contrasting it with the main one (red) However, the red parts also contain hallucinations, not to mention the neglect of the 3 rd

No.	Abstracts	Label	Base LED	Large LED	Base Centrum	Tuned LED	Tuned Centrum	Two-step
3524	(1):	More recently, a technique @cite	Rouge scores:	Rouge scores:	Rouge scores:	Rouge scores:	Rouge scores:	Rouge scores:
	The explosion in the availability of GPS-enabled devices has resulted in an	was designed to study the	- Rouge 2:	- Rouge 2:	- Rouge 2:	- Rouge 2:	- Rouge 2:	- Rouge 2:
	abundance of trajectory data. In reality, however, majority of these trajectories	trajectory inference problem in a	0.0321 (prec)	0.034 (prec)	0.0051 (prec)	0.0 (prec)	0.0 (prec)	0.0233 (prec)
	are collected at a low sampling rate and only provide partial observations on	setting where trajectories are not	0.1316 (recall)	0.1316 (recall)	0.0263 (recall)	0.0 (recall)	0.0 (recall)	0.0526 (recall)
	their actually traversed routes. Consequently, they are mired with uncertainty.	constrained by a network. Due to	0.0515 (f-1)	0.0541 (f-1)	0.0085 (f-1)	0.0 (f-1)	0.0 (f-1)	0.0323 (f-1)
	In this paper, we develop a technique called Infer Tra to infer uncertain	the focus on network-free	- Rouge L:	- Rouge L:	- Rouge L:	- Rouge L:	- Rouge L:	- Rouge L:
	trajectories from network-constrained partial observations. Rather than	trajectories, @cite is not	0.0955 (prec)	0.1014 (prec)	0.0653 (prec)	0.2 (prec)	0.1591 (prec)	0.1149 (prec)
	predicting the most likely route, the inferred uncertain trajectory takes the	applicable to our problem.	0.3846 (recall)	0.3846 (recall)	0.3333 (recall)	0.2051 (recall)	0.1795 (recall)	0.2564 (recall)
	form of an edge-weighted graph and summarizes all probable routes in a		0.1531 (f-1)	0.1604 (f-1)	0.1092 (f-1)	0.2025 (f-1)	0.1687 (f-1)	0.1587 (f-1)
	holistic manner. For trajectory inference, Infer Tra employs Gibbs sampling by		Summary:	Summary:	Summary:	Summary:	Summary:	Summary:
	learning a Network Mobility Model (NMM) from a database of historical		The explosion in the availability	the explosion in the availability	The world's first GPS-enabled	@cite proposed a routing	<pre>@cite proposed a routing</pre>	@cite proposed a routing
	trajectories. Extensive experiments on real trajectory databases show that the		of GPS-enabled devices has	of GPS-enabled devices has	vehicle has been around for	algorithm to construct the top-k	algorithm to construct the top-	algorithm to construct the top
	graph-based approach of Infer Tra is up to 50 more accurate, 20 times faster,		resulted in an abundance of	resulted in an abundance of	more than a decade, but it's not	routes according to a user-	@math routes according to a	@math routes according to a
	and immensely more versatile than state-of-the-art techniques.		trajectory data. In reality,	trajectory data. in reality,	the first time we've seen the use	specified query. The routing	user-specified query. They have	user-specified query. However
	(2):		however, majority of these	however, majority of these	of GPS-enabled vehicles. In fact,	algorithm is based on	conducted extensive	the routing algorithm does no
	The advances in location-acquisition technologies have led to a myriad of		trajectories are collected at a	trajectories are collected at a	we're only a few years away	collaborative learning among	experiments on two real	consider the spatial and
	spatial trajectories. These trajectories are usually generated at a low or an		low sampling rate and only	low sampling rate and only	from the start of a new	uncertain trajectories and	datasets, namely Foursquare	temporal characteristics of
	irregular frequency due to applications' characteristics or energy saving,		provide partial observations on	provide partial observations on	generation of GPS-powered	construct a routable graph by	check-in datasets and taxi	uncertain trajectories <mark>. In</mark>
	leaving the routes between two consecutive points of a single trajectory		their actually traversed routes.	their actually traversed routes.	vehicles, which will soon be able	collaborative learning among the	trajectories. The results show	contrast, our routing algorithm
	uncertain (called an uncertain trajectory). In this paper, we present a Route		Consequently, they are mired	Consequently, they are mired	to connect us to GPS-enabled	uncertain trajectories.	that RICK is both effective and	able to construct the popular
	Inference framework based on Collective Knowledge (abbreviated as RICK) to		with uncertainty. In this paper,	with uncertainty. in this paper,	devices. That means we'll be	Comment:	efficient.	routes from uncertain
	construct the popular routes from uncertain trajectories. Explicitly, given a		we develop a technique called	we develop a technique called	able to use GPS-enabled	- Shows weak signs of MDS,	Comment:	trajectories in a mutual
	location sequence and a time span, the RICK is able to construct the top-k		Infer Tra to infer uncertain	Infer Tra to infer uncertain	smartphones to track us down	which presents the 2 nd (green)	- Shows weak signs of MDS,	reinforcement way (i.e.,
	routes which sequentially pass through the locations within the specified time		trajectories from network-	trajectories from network-	and track us down. But before	article as different from the	which presents the 2 nd (green)	uncertain + uncertain →
	span, by aggregating such uncertain trajectories in a mutual reinforcement		constrained partial observations.	constrained partial observations.	we do that, let's take a closer	main one.	article as different from the	certain). Moreover, we do not
	way (i.e., uncertain + uncertain → certain). Our work can benefit trip planning,		Rather than predicting the most	rather than predicting the most	look at what's going on in the	- Red part shows some repeat of	main one.	consider the temporal and
	traffic management, and animal movement studies. The RICK comprises two		likely route, the inferred	likely route, the inferred	world of GPS-based vehicles.	the previous meaning		spatial characteristics of the
	components: routable graph construction and route inference. First, we		uncertain trajectory takes the	uncertain trajectory takes the	We're going to start with GPS-			uncertain trajectories and
	explore the spatial and temporal characteristics of uncertain trajectories and		form of an edge-weighted graph	form of an edge-weighted graph	enabled cars, which have been			construct a routing algorithm
	construct a routable graph by collaborative learning among the uncertain		and summarizes all probable	and summarizes all probable	around for a long time, but			that can construct the routes
	trajectories. Second, in light of the routable graph, we propose a routing		routes in a holistic manner. For	routes in a holistic manner. for	they're often generated at a low			according to the user-specified
	algorithm to construct the top-k routes according to a user-specified query.		trajectory inference, Infer Tra	trajectory inference,	or irregular frequency due to			queries.
	We have conducted extensive experiments on two real datasets, consisting of		employs Gibbs sampling by	we employ Gibbs sampling by	applications' characteristics or			Comment:
	Foursquare check-in datasets and taxi trajectories. The results show that RICK		learning a Network Mobility	learning a network mobility	energy saving, leaving the routes			- Shows signs of MDS, provid
	is both effective and efficient.		Model (NMM) from a database	model (nMM) from a database	between two consecutive points			a summary of the 2 nd art
			of historical trajectories.	of historical trajectories.	of a single trajectory uncertain			(green) and contrasting it w
			Extensive experiments on real	extensive experiments on real	(called an uncertain trajectory).			the main one (red).
			trajectory databases show that	trajectory databases show that	In this paper, we present a Route			- However, the red parts a
			the graph-based approach of	the graph-based approach of	Inference framework based on			contain hallucinations, not
			Infer Tra is up to 50 more	Infer Tra is up to 50 more	Collective Knowledge			mention the neglect of the
			accurate, 20 times faster, and	accurate, 20 times faster, and	(abbreviated as RICK) to			article
			immensely more versatile than	immensely more versatile than	construct the popular routes			
			state-of-the-art	state-of-the-art techniques.	from uncertain trajectories.			
			techniques. The advances	Comment:	Explicitly, given a location			
			in location-acquisition	- Copied the first tokens only,	, ,,,,			
			technologies have led		1			
			Comment:	replacement subject noun				
			- Copied the first tokens only	(red)	Comment:			
			- No indication of MDS	- No indication of MDS	- Hallucinated a random			
			The state of the s		background on GPS (red)			
					before starting to summarize			
					the 2 nd article (green)			
					- No indication of MDS			
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We present a method for extracting depth information from a rectified image pair. We train a convolutional neural network to predict how well two image patches match and use it to compute the stereo matching cost. The cost is refined by cross-based cost aggregation and semiglobal matching, followed by a left-right consistency check to eliminate errors in the occluded regions. Our stereo method achieves an error rate of 2.61 on the KITTI stereo dataset and is	Tuned Centrum ouge scores:	Two-step Rouge scores:
We present a method for extracting depth information from a rectified image pair. We train a convolutional neural network to predict how well two image patches match and use it to compute the stereo matching cost. The cost is refined by cross-based cost aggregation and semiglobal matching, followed by a left-right consistency check to eliminate errors in the occluded regions. Our stereo method achieves an error rate of 2.61 on the KITTI stereo dataset and is	-	Rouge scores:
while machine learning has been instrumental to the ongoing progress in most areas of computer vision, it has not been applied to the problem of stereo matching with similar frequency or success. We present a supervised format control of the stereo matching with similar frequency or success. We present a supervised format accordance and the state of features that applied to the problem of stereo matching with which is the best performing register with the aim to improve accuracy of stereo confidence measures, we apply the random decision forest framework to missing both and in providence, which consistently improved area under curve values of sparsification measures in consistently improved area under curve values of sparsification measures in consistently improved area under curve values of sparsification measures in all but one out of 194 frames of the KITTI dataset. 20.281 (F.1) 20.281 (F.1) 20.281 (F.1) 20.282 (F.1) 20.283 (F.1) 20.283 (F.1) 20.283 (F.1) 20.283 (F.1) 20.283 (F.1) 20.283 (F.1) 20.284 (F.1) 20.283 (F.1) 20.284 (F.1) 20.283 (F.1) 20.283 (F.1) 20.284 (F.1) 20.284 (F.1) 20.284 (F.1) 20.285 (F.1) 20.285 (F.1) 20.285 (F.1) 20.286 (F.1) 20.286 (F.1) 20.286 (F.1) 20.286 (F.1) 20.287 (F.1) 20.288 (F.1) 20.288 (F.1) 20.288 (F.1) 20.288 (F.1) 20.289 (F.1) 2	2.0517 (prec) 2.0526 (recall) 2.0526 (recall) 2.0522 (f-1) Rouge L: 2.2373 (prec) 2.2414 (recall) 2.2393 (f-1) 2.239 (f-1) 2.2393 (f-1) 2.2393 (f-1) 2.239 (f-1) 2.2393 (f-1) 2.239 (f-1) 2.239 (f-1) 2.	- Rouge 2: 0.1122 (prec) 0.193 (recall) 0.1419 (f-1) - Rouge L: 0.2121 (prec) 0.3621 (recall) 0.2675 (f-1) Summary: In @cite @cite, the authors used a random forest to predict the correctness of stereo matching based on a random forest and a set of features that capture various forms of information about each pixel. However, they do not consider sparsification. In addition, they did not use sparsification to improve the accuracy of the disparity maps, and they do not require sparsification in order to improve the performance of the matching. Moreover, their work does not rely on the sparsification, but rather on sparsifying the disparity maps in order to

No.	Abstracts	Label	Base LED	Large LED	Base Centrum	Tuned LED	Tuned Centrum	Two-step
4191	(1):	In @cite , assuming the expected	Rouge scores:	Rouge scores:	Rouge scores:	Rouge scores:	Rouge scores:	Rouge scores:
	Mobile Context-Aware Recommender Systems can be naturally modelled as an	reward of a document is linear,	- Rouge 2:	- Rouge 2:	- Rouge 2:	- Rouge 2:	- Rouge 2:	- Rouge 2:
	exploration exploitation trade-off (exr exp) problem, where the system has to	they perform recommendation	0.0307 (prec)	0.0625 (prec)	0.0417 (prec)	0.0556 (prec)	0.0743 (prec)	0.0357 (prec)
	choose between maximizing its expected rewards dealing with its current	based on contextual information	0.0926 (recall)	0.1852 (recall)	0.1667 (recall)	0.0556 (recall)	0.2037 (recall)	0.0556 (recall)
	knowledge (exploitation) and learning more about the unknown user's	about the users' documents. To	0.0461 (f-1)	0.0935 (f-1)	0.0667 (f-1)	0.0556 (f-1)	0.1089 (f-1)	0.0435 (f-1)
	preferences to improve its knowledge (exploration). This problem has been	maximize the total number of	- Rouge L:	- Rouge L:	- Rouge L: 0.0737 (prec)	- Rouge L: 0.1636 (prec)	- Rouge L:	- Rouge L:
	addressed by the reinforcement learning community but they do not consider the risk level of the current user's situation, where it may be dangerous to	user's clicks, this work proposes the LINUCB algorithm which is	0.0976 (prec) 0.2909 (recall)	0.1304 (prec) 0.3818 (recall)	0.2909 (recall)	0.1636 (prec) 0.1636 (recall)	0.1678 (prec) 0.4545 (recall)	0.1294 (prec) 0.2 (recall)
	recommend items the user may not desire in her current situation if the risk	computationally efficient if the	0.1461 (f-1)	0.1944 (f-1)	0.1176 (f-1)	0.1636 (f-1)	0.2451 (f-1)	0.2 (fecall) 0.1571 (f-1)
	level is high. We introduce in this paper an algorithm named R-UCB that	expected rewards of documents	Summary:	Summary:	Summary:	Summary:	Summary:	Summary:
	considers the risk level of the user's situation to adaptively balance between	are linear which is not always the	Mobile Context-Aware	personalized web services strive	A new algorithm for	In @cite, the authors propose a	In @cite, the authors model	In @cite, the authors propose a
	exr and exp. The detailed analysis of the experimental results reveals several	case.	Recommender Systems can be	to adapt their services	personalized recommendation	contextual bandit algorithm that	personalized recommendation	contextual bandit algorithm that
	important discoveries in the exr exp behaviour.		naturally modelled as an	(advertisements, news articles)	of news articles has been	is computationally efficient and	of news articles as a contextual	is computationally efficient and
	(2):		exploration exploitation trade-	to individual users by making	developed by the reinforcement	well motivated from learning	bandit problem, a principled	well motivated from learning
	Personalized web services strive to adapt their services (advertisements, news		off (exr exp) problem, where the	use of both content and user	learning community, but it does	theory. They argue that any	approach in which a learning	theory. They argue that any
	articles, etc.) to individual users by making use of both content and user		system has to choose between	information. despite a few	not consider the risk level of the	bandit algorithm can be reliably	algorithm sequentially selects	algorithm that can reliably
	information. Despite a few recent advances, this problem remains challenging		maximizing its expected rewards dealing with its current	recent advances, this problem	current user's situation, where it	evaluated offline using	articles to serve users based on contextual information about	evaluate offline using previous
	for at least two reasons. First, web service is featured with dynamically changing pools of content, rendering traditional collaborative filtering		knowledge (exploitation) and	remains challenging for at least two reasons.	may be dangerous to recommend items the user may	previously recorded random traffic. Finally, they successfully	the users and articles, while	recorded random traffic is
	methods inapplicable. Second, the scale of most web services of practical		learning more about the	first, web service is featured	not desire in her current	applied their new algorithm to a	simultaneously adapting its	reliably evaluated. They also argue that any offline evaluation
	interest calls for solutions that are both fast in learning and computation. In		unknown user's preferences to	with dynamically changing pools	situation if the risk level is high.	Yahoo! Front Page Today Module	article selection strategy based	method can be reliably applied
	this work, we model personalized recommendation of news articles as a		improve its knowledge	of content, rendering traditional	We introduce in this paper an	dataset containing over 33	on user-click feedback to	to a large dataset containing
	contextual bandit problem, a principled approach in which a learning		(exploration). This problem has	collaborative filtering methods	algorithm named R-UCB that	million events.	maximize total user clicks. The	over 33 million events. The
	algorithm sequentially selects articles to serve users based on contextual		been addressed by the	inapplicable.	considers the risk level to	Comment:	contributions of this work are	results showed a 12.5 click lift
	information about the users and articles, while simultaneously adapting its		reinforcement learning	second, the scale of most web	adaptively balance between exr	- Shows weak signs of MDS,	threefold. First, they propose a	compared to a standard context-
	article-selection strategy based on user-click feedback to maximize total user		community but they do not	services of practical interest calls	and exp. The detailed analysis of	which presents the 2 nd (green)	new, general contextual bandit	free bandit algorithm, and the
	clicks. The contributions of this work are three-fold. First, we propose a new,		consider the risk level of the	for solutions that are both fast in	the experimental results reveals	article as different from the	algorithm that is	advantage becomes even
	general contextual bandit algorithm that is computationally efficient and well		current user's situation, where it	learning and computation. in	several important discoveries in	main one	computationally efficient and	greater when data gets more
	motivated from learning theory. Second, we argue that any bandit algorithm can be reliably evaluated offline using previously recorded random traffic.		may be dangerous to recommend items the user may	this work, we model personalized recommendation	the exr exp behaviour. Personalized web services strive		well motivated from learning theory. Second, they argue that	scarce. Comment:
	Finally, using this offline evaluation method, we successfully applied our new		not desire in her current	of news articles as a contextual	to adapt their services		any bandit algorithm can be	-Shows weak signs of MDS,
	algorithm to a Yahoo! Front Page Today Module dataset containing over 33		situation if the risk level is high.	bandit problem, a principled	(advertisements, news articles,		reliably evaluated offline using	which presents the 2 nd (green)
	million events. Results showed a 12.5 click lift compared to a standard context-		We introduce in this paper an	approach in which a learning	etc.) to individual users by		previously recorded random	article as different from the
	free bandit algorithm, and the advantage becomes even greater when data		algorithm named R-UCB that	algorithm sequentially selects	making use of both content and		traffic. Finally, using this offline	main one
	gets more scarce.		considers the risk Level of the	articles to serve users based on	user information. Despite a few		evaluation method, they	-The 1st red part contains weird
			user's situation to adaptively	contextual information about	recent advances, this problem		successfully applied their new	phrasing while the 2 nd one is a
			balance between exr and exp.	the users and articles, while	remains challenging for at least		algorithm to a Yahoo! Front Page	hallucination
			The detailed analysis of the	simultaneously adapting its	two reasons. First, web service is		Today Module dataset	
			experimental results reveals several important discoveries in	article-selection strategy based on user-click feedback to	featured with dynamically changing pools of content,		containing over 33 million events. Results showed a 12.5	
			the exr exp behaviour.	maximize total user clicks.	rendering traditional		click lift compared to a standard	
			Personalized web services strive	we propose a new, general	collaborative filtering methods		context-free bandit algorithm,	
			to adapt their services	contextual bandit algorithm that	inapplicable. Second, the scale		and the advantage becomes	
			(advertisements, news articles,	is computationally efficient and	of most web services of practical		even greater when data gets	
			etc.) to individual users by	well motivated from learning	interest calls for solutions that		more scarce.	
			making use of both content and	theory.	are both fast in learning and		Comment:	
			user information. Despite	moreover, we argue that any	computation. In this work, we		-Shows weak signs of MDS,	
			Comment:	bandit algorithm can be reliably	model personalized		which presents the 2 nd (green)	
			Copied the first tokens onlyNo indication of MDS	evaluated offline using Comment:	recommendation of news articles		article as different from the main one	
			- No indication of MD3	- Copied from the 2 nd article only	as a contextual bandit problem, a principled approach in which a		-Some creative writing noted	
				- No indication of MDS	learning algorithm sequentially		(red)	
				No maleation of Miss	selects articles to serve users		(iea)	
					based on contextual information			
					about the users and articles,			
					while simultaneously adapting			
					its article-selection strategy			
					based on user-click feedback			
					Comment:			
					- Simply joined together selected			
					parts of the 1 st (yellow) and 2 nd (green) articles			
					- No indication of MDS			
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No.	Abstracts	Label	Base LED	Large LED	Base Centrum	Tuned LED	Tuned Centrum	Two-step
4820	(1): This paper presents a new method and a constraint-based objective function to solve two problemsrelated to the design of optical telecommunication networks, anmely the Synchronous Optical Network Imp. Assignment Problem (SRAP) and the Intra-ring Synchronous Optical Network DesignProblem (IDP). These network topology problems can be represented as a graph partitioning withcapacity constraints as shown in previous works. We present here a new objective function and anew local search algorithm to solve these problems. Experiments conducted in C (2): This paper considers two problems that arise in the design of optical telecommunication networks when a ring-based topology is adopted, namely the SONET Ring Assignment Problem and the Intraring Synchronous Optical Network Design Problem. We show that these two network topology problems correspond to graph partitioning problems with capacity constraints: the first is a vertex partitioning problem, while the latter is an edge partitioning problem. We consider solution methods for both problems, based on metaheuristat algorithms. We first describe variable objective functions that depend on the transition from one solution to a neighboring one, then we apply several diversification and intensification techniques including Path Relinking, exploring Tabu Search and Scatter Search. Finally we propose all diversification method based on the use of multiple neighborhoods. A set of extensive computational results is used to compare the behaviour of the proposed methods and objective functions.	The two other methods described in @cite are based on the idea that to save ADMs a good solution should have very dense rings. They are both greedy and rely on a clique algorithm. In graph theory, a clique in an undirected graph @math is a subset of the vertex set @math , such that for every two vertices in @math , there exists an edge connecting the two. Finding a clique is not that easy, a way to do it is to use an "Union-Find" strategie, two clique @math and @math such that each node in @math is adjacent to each node in @math then merge the two cliques (). The associated heuristic starts by considering each node to be a clique of size one, and to merge two cliques into a larger clique until there are no more possible merges.	Rouge scores: - Rouge 2: 0.0132 (prec) 0.0144 (recall) 0.0138 (f-1) - Rouge L: 0.1316 (prec) 0.1429 (recall) 0.137 (f-1) Summary: This paper presents a new method and a constraint-based objective function to solve two problemsrelated to the design of optical telecommunication networks, namely the Synchronous Optical Net-work Ring Assignment Problem (SRAP) and the Intra-ring Synchronous optical Network DesignProblem (IDP). These network topology problems can be represented as a graph partitioning withcapacity constraints as shown in previous works. We present here a new objective function and anew local search algorithm to solve these problems. Experiments conducted in CERN and the University of California, Berkeley. This paper considers two problems that arise in the design of Optical telecommunication networks when a ring-based topology is adopted, namely the SONET Ring Assignment Problem and the Intraring Synchronous O Network Design Problem. We show that these two network topologies problems correspond to graph partitioning problems with capacity constraints: the first is a vertex partitioning problem. Comment: - Copied the first tokens only - No indication of MDS	Rouge scores: - Rouge 2: 0.0 (prec) 0.0 (recall) 0.0 (f-1) - Rouge L: 0.1579 (prec) 0.0857 (recall) 0.1111 (f-1) Summary: this paper presents a new method and a constraint-based objective function to solve two problemsrelated to the design of optical telecommunication networks, namely the Synchronous Optical Net-work Ring Assignment Problem (SRAP) and the Intra-ring Synchronous optical Network DesignProblem (IDp). these network topology problems can be represented as a graph partitioning withcapacity constraints as shown in previous works. we present here a new objective function and anew local search algorithm to solve these problems. Comment: - Copied the first tokens only - No indication of MDS	Rouge scores: - Rouge 2: 0.0205 (prec) 0.0288 (recall) 0.024 (f-1) - Rouge L: 0.1276 (prec) 0.1786 (recall) 0.1488 (f-1) Summary: This paper presents a new method and a constraint-based objective function to solve two problems related to the design of optical telecommunication networks, namely the Synchronous Optical Net-work Ring Assignment Problem (SRAP) and the Intraring Synchronous optical Network DesignProblem (IDP). These network topology problems can be represented as a graph partitioning withcapacity constraints as shown in previous works. We present here a new objective function and anew local search algorithm to solve these problems. Experiments conducted in C This paper considers two problems that arise in the design of Optical telecommunication networks when a ring-based topology is adopted, namely the SONET Ring Assignment Problem and the Intra-ring SynchronousOptical Network Design Problem. We show that these two network topology problem correspond to graph partitioning problems with capacity constraints: the first is a partitioning problem, while the latter is an edge partitioning problems, based on metheuristic algorithms. We first describe variable objective functions that depend on the transition from one solution to a neighboring one, then we apply several diversification and intensification techniques including Path Relinking, eXploring Tabu Search and Scatter Search. Finally we propose a divers Comment: - Copied the first tokens only - No indication of MDS	Rouge scores: - Rouge 2: 0.0189 (prec) 0.0072 (recall) 0.0104 (f-1) - Rouge L: 0.2407 (prec) 0.0929 (recall) 0.134 (f-1) Summary: In the context of optical telecommunication networks, the SONET Ring Assignment Problem (SRAP) and the Intraring Synchronous Optical Network Design Problem (IDP) are two problems that arise when a ring-based topology is adopted. The SRAP problem can be represented as a graph partitioning problem, while the IDP problem is a edge partitioning problem. Comment: - Shows no sign of MDS, with the model just extracting the common theme of the 2 articles	Rouge scores: - Rouge 2: 0.0357 (prec) 0.0072 (recall) 0.012 (f-1) - Rouge L: 0.2414 (prec) 0.05 (recall) 0.0828 (f-1) Summary: In @cite, an objective function and a diversification method are proposed to solve the SONET Ring Assignment Problem (SRAP) and the Intra-ring Synchronous Optical Network Design Problem (IDP). Comment: - Shows weak signs of MDS, which presents the 2nd (green) article as different from the main one	Rouge scores: - Rouge 2: 0.1233 (prec) 0.0647 (recall) 0.0849 (f-1) - Rouge L: 0.2703 (prec) 0.1429 (recall) 0.1869 (f-1) Summary: In @cite, the objective functions of the SONET ring assignment problem and the IDP problem are discussed in terms of a metaheuristic algorithm. In particular, the objective function for SONET Ring Assignment Problem is described in @cite. The objective functions of SONet Ring Assignment Problem are defined as: where @math is the number of neighbors, @math the number of nodes in the network, @math and @math are the number of vertices in the network. Comment: - Shows weak signs of MDS, which presents the 2 nd (green) article as different from the main one - Contains more relevant information that the other tuned models

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No.	Abstracts	Label	Base LED	Large LED	Base Centrum	Tuned LED	Tuned Centrum	Two-step
235	(1): We present a data-driven framework for incorporating side information in dynamic optimization under uncertainty. Specifically, our approach uses predictive machine learning methods (such as k-nearest neighbors, kernel regression, and random forests) to weight the relative importance of various data-driven uncertainty sets in a robust optimization formulation. Through a novel measure concentration result for local machine learning methods, we prove that the proposed framework is asymptotically optimal for stochastic dynamic optimization with covariates. We also describe a general-purpose approximation for the proposed framework, based on overlapping linear decision rules, which is computationally tractable and produces high-quality solutions for dynamic problems with many stages. Across a variety of examples in shipment planning, inventory management, and finance, our method achieves improvements of up to 15 over alternatives and requires less than one minute of computation time on problems with twelve stages. (2): We investigate a data-driven approach to two-stage stochastic linear optimization in which an uncertainty set is constructed around each data point. We propose an approximation algorithm for these sample robust optimization problems by optimizing a separate linear decision rule for each uncertainty set. We show that the proposed algorithm combines the asymptotic optimality and scalability of the sample average approximation while simultaneously offering improved out-of-sample performance guarantees. The practical value of our method is demonstrated in network inventory management and hospital scheduling. (3): Stochastic programming provides a versatile framework for decision-making under uncertainty, but the resulting optimization problems can be computationally demanding. It has recently been shown that primal and dual linear decision rule approximations that result in loose bounds. To address this problem, we propose a lifting technique that maps a given stochastic program to a negurinal p	Several recent papers have focused on tractable approximations of two- and multistage and robust optimization. Many approaches are based around policy approximation schemes, including lifted linear decision rules , @math -adaptivity , and finite adaptability . Alternative approaches include tractable approximations of copositive formulations . Closest related to the approximation scheme in this paper are @cite and @cite , which address two-stage problems via overlapping decision rules. @cite propose a modeling approach that leads to novel approximations of various distributionally robust applications, including two-stage distributionally robust optimization using Wasserstein ambiguity sets and expectations of piecewise convex objective functions in single-stage problems. Independently, @cite investigate a of two-stage sample robust optimization by optimizing a separate linear decision rule for each uncertainty set and prove that this approximation gap converges to zero as the amount of data goes to infinity. In of this paper, we show how to extend similar techniques to dynamic problems with many stages for the first time.	Rouge scores: - Rouge 2: 0.0812 (prec) 0.0823 (recall) 0.0818 (f-1) - Rouge L: 0.1553 (prec) 0.1572 (recall) 0.1562 (f-1) Summary: We present a data-driven framework for incorporating side information in dynamic optimization under uncertainty. Specifically, our approach uses predictive machine learning methods (such as k-nearest neighbors, kernel regression, and random forests) to weight the relative importance of various data-driven uncertainty sets in a robust optimization formulation. Through a novel measure concentration result for local machine learning methods, we prove that the proposed framework is asymptotically optimal for stochastic dynamic optimization with covariates. We also describe a general-purpose approximation for the proposed framework, based on overlapping linear decision rules, which is computationally tractable and produces high- quality solutions for dynamic problems with many stages. Across a variety of examples in shipment planning, inventory management, and finance, our method achieves improvements of up to 15 over alternatives and requires less than one minute of computation time on problems with twelve stages. We investigate a data-based approach to two-stage stochastic linear optimization in which an uncertainty set is Comment: - Copied the first tokens only - No indication of MDS	Rouge scores: - Rouge 2: 0.0917 (prec) 0.0696 (recall) 0.0791 (f-1) - Rouge L: 0.1983 (prec) 0.1509 (recall) 0.1714 (f-1) Summary: we present a data-driven framework for incorporating side information in dynamic optimization under uncertainty. out approach uses predictive machine learning methods (such as k-nearest neighbors, kernel regression, and random forests) to weight the relative importance of various data- driven uncertainty sets in a robust optimization formulation. through a novel measure concentration result for local machine learning methods , we prove that the proposed framework is asymptotically optimal for stochastic dynamic optimization with covariates. we also describe a general- purpose approximation for the proposed framework, based on overlapping linear decision rules, which is computationally tractable and produces high- quality solutions for dynamic problems with many stages. the practical value of our method is demonstrated in network inventory management and hospital scheduling. Comment: - Mostly copied the first tokens, except for the dropping of the word "Specifically" and the replacement of the last sentence with the green part - No indication of MDS	Rouge scores: - Rouge 2: 0.1179 (prec) 0.1582 (recall) 0.1351 (f-1) - Rouge L: 0.1784 (prec) 0.239 (recall) 0.2043 (f-1) Summary: A new approach to stochastic dynamic optimization has been developed by a team of researchers from the University of California, Los Angeles, and the University of Southern California. The new approach is based on the use of predictive machine learning methods (such as k-nearest neighbors, kernel regression, and random forests) to weight the relative importance of various data-driven uncertainty sets in a robust optimization formulation. Through a novel measure concentration result for local machine learning methods, we prove that the proposed framework is asymptotically optimal for stochastic Dynamic Optimization. We also describe a general-purpose approximation for the proposed framework, based on overlapping linear decision rules, which is computationally tractable and produces high-quality solutions for dynamic problems with many stages. Across a variety of examples in shipment planning, inventory management, and finance, our method achieves improvements of up to 15 over alternatives and requires less than one minute of computation time on problems with twelve stages. We investigate a data-driven approach to two-stage stochastic linear optimization in which an uncertainty set is constructed around each data point. We propose an approximation algorithm for these sample robust optimization problems by optimizing a separate linear decision rule for each uncertainty set. We show that the proposed algorithm Comment: - Except for the randomly hallowed by the initial parts of the 2 nd .	Rouge scores: - Rouge 2: 0.2093 (prec) 0.057 (recall) 0.0896 (f-1) - Rouge L: 0.3409 (prec) 0.0943 (recall) 0.1478 (f-1) Summary: In @cite, the authors propose a linear decision rule for each uncertainty set. However, their approach is not as robust as our approach, which is based on overlapping linear decision rules. In contrast, our approach is asymptotically optimal for stochastic dynamic optimization with covariates. Comment: - Shows sign of MDS, with the sentence in red contrasting the 1st (yellow) and 2nd articles However, the model failed to mention anything about the 3rd article	Rouge 2: 0.2708 (prec) 0.0823 (recall) 0.1262 (f-1) - Rouge L: 0.4082 (prec) 0.1258 (recall) 0.1923 (f-1) Summary: In the context of stochastic dynamic optimization with covariates, @cite and @cite proposed methods for optimizing a separate linear decision rule for each uncertainty set. In @cite, the authors proposed a lifting technique that maps a given stochastic program to an equivalent problem on a higher-dimensional probability space. Comment: - Clear sign of MDS, with the sentence context of the main article given (yellow) and the 2nd (green) and 3rd (blue) articles clearly mentioned.	Rouge scores: - Rouge 2: 0.046 (prec) 0.0253 (recall) 0.0327 (f-1) - Rouge L: 0.1932 (prec) 0.1069 (recall) 0.1377 (f-1) Summary: In @cite @cite, the authors propose a framework for stochastic dynamic optimization, which is computationally tractable and efficient. However, their framework is not asymptotically asymptotic, since it does not require any additional stages, and we do not need any additional stages. Moreover, the authors in @cite show that their framework is computationally optimal for the stochastic setting, which is more tractable than our method. Moreover, our framework is as well-suited for dynamic problems in which multiple stages are required, which is not the case in our case Comment: - Some signs of MDS, with the red parts attempting to make contrasts However, the model wrongly uses words of the main article (yellow) to describe the 2nd and 3nd articles.

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о.	Abstracts	Label	Base LED	Large LED	Base Centrum	Tuned LED	Tuned Centrum	Two-step
3	(1):	Concurrently with our work, some	Rouge scores:	Rouge scores:	Rouge scores:	Rouge scores:	Rouge scores:	Rouge scores:
	Previous works utilized "smaller-norm-less-important" criterion to prune filters	data independent filter pruning	- Rouge 2:	- Rouge 2:	- Rouge 2:	- Rouge 2:	- Rouge 2:	- Rouge 2:
	with smaller norm values in a convolutional neural network. In this paper, we	strategies @cite @cite @cite	0.0483 (prec)	0.037 (prec) 0.0845 (recall)	0.0193 (prec)	0.0658 (prec)	0.0506 (prec)	0.0412 (prec)
	analyze this norm-based criterion and point out that its effectiveness depends	@cite have been explored. @cite	0.0986 (recall)	1 ' '	0.0563 (recall)	0.0704 (recall)	0.1127 (recall)	0.0563 (recall)
	on two requirements that are not always met: (1) the norm deviation of the filters should be large; (2) the minimum norm of the filters should be small. To	utilizes an @math -norm criterion	0.0648 (f-1)	0.0515 (f-1)	0.0288 (f-1)	0.068 (f-1)	0.0699 (f-1)	0.0476 (f-1)
	solve this problem, we propose a novel filter pruning method, namely Filter	to prune unimportant filters. @cite proposes to select filters	- Rouge L: 0.1301 (prec)	- Rouge L: 0.1043 (prec)	- Rouge L: 0.0769 (prec)	- Rouge L: 0.1558 (prec)	- Rouge L: 0.0943 (prec)	- Rouge L: 0.1327 (prec)
	Pruning via Geometric Median (FPGM), to compress the model regardless of	with an @math -norm criterion	0.2639 (recall)	0.2361 (recall)	0.2222 (recall)	0.1558 (prec) 0.1667 (recall)	0.2083 (recall)	0.1806 (recall)
	those two requirements. Unlike previous methods, FPGM compresses CNN	and prune those selected filters in	0.1743 (f-1)	0.1447 (f-1)	0.1143 (f-1)	0.1611 (f-1)	0.1299 (f-1)	0.1500 (fecall) 0.1529 (f-1)
	models by pruning filters with redundancy, rather than those with "relatively	a soft manner. @cite proposes to	Summary:	Summary:	Summary:	Summary:	Summary:	Summary:
	less" importance. When applied to two image classification benchmarks, our	prune models by enforcing	Previous works utilized "smaller-	model pruning has become a	Deep Convolutional Neural	In <u>@cite</u> , the authors proposed a	@cite proposed a filter pruning	In @cite, the authors propose
	method validates its usefulness and strengths. Notably, on CIFAR-10, FPGM	sparsity on the scaling parameter	norm-less-important" criterion	useful technique that improves	Networks (CNN) has achieved	filter pruning method to	method based on spectral	spectral clustering filter prunir
	reduces more than 52 FLOPs on ResNet-110 with even 2.69 relative accuracy	of batch normalization layers.	to prune filters with smaller	the computational efficiency of	significant success in computer	compress CNN models by	clustering filter pruning with soft	with soft self-adaption manne
	improvement. Moreover, on ILSVRC-2012, FPGM reduces more than 42 FLOPs	@cite uses spectral clustering on	norm values in a convolutional	deep learning, making it possible	vision field. However, the high	pruning filters with smaller norm	self-adaption manners (SCSP).	(SCSP). They first applied spec
	on ResNet-101 without top-5 accuracy drop, which has advanced the state-of-	filters to select unimportant ones.	neural network. In this paper, we	to deploy solutions on resource-	computational cost of the deep	values. However, their method	They first apply spectral	clustering on filters layer by lay
	the-art. Code is publicly available on GitHub: this https URL	·	analyze this norm-based	limited scenarios. in this paper,	complex models prevents the	does not require the support of	clustering on filters layer by layer	to explore their intrinsic
	(2):		criterion and point out that its	we propose a channel pruning	deployment on edge devices	sparse convolution libraries.	to explore their intrinsic	connections and only count or
	Deep Convolutional Neural Networks (CNN) has achieved significant success in		effectiveness depends on two	technique for accelerating the	with limited memory and	Moreover, they do not need the	connections and only count on	efficient groups. Then, the
	computer vision field. However, the high computational cost of the deep		requirements that are not always	computations of deep	computational resource. In this	support of CNN libraries and can	efficient groups. @cite proposed	network gradually selects
	complex models prevents the deployment on edge devices with limited memory		met: (1) the norm deviation of	convolutional neural networks	paper, we propose a novel filter	work with existing efficient BLAS	an approach to accelerate the	meaningful groups. The autho
	and computational resource. In this paper, we proposed a novel filter pruning		the filters should be large; (2) the	(CNNs), which does not critically	pruning for convolutional neural	<mark>libraries</mark> . To solve this problem,	computations of deep	also proposed a novel angle to
	for convolutional neural networks compression, namely spectral clustering filter		minimum norm of the filter	rely on the assumption that a	networks compression, namely	they proposed a method called	convolutional neural networks	interpret the model compress
	pruning with soft self-adaption manners (SCSP). We first apply spectral		should be small. To solve this	smaller- norm parameter or	spectral clustering filter pruning	Filter Pruning via Geometric	(CNNs), which does not critically	process. In @cite, the authors
	clustering on filters layer by layer to explore their intrinsic connections and only		problem, we propose a novel	feature plays a less informative	with soft self-adaption manners	Median (FPGM) to prune filters	rely on this assumption. Instead,	proposed <mark>a novel method for</mark>
	count on efficient groups. By self-adaption manners, the pruning operations can		filter pruning method, namely	role at the inference time.	(SCSP). We first apply spectral	with larger norm values in a	it focuses on direct simplification	convolutional neural networks
	be done in few epochs to let the network gradually choose meaningful groups.		Filter Pruning via Geometric	our approach takes two stages :	clustering on filters layer by layer	convolutional neural network.	of the channel-to-channel	compression, which is based o
	According to this strategy, we not only achieve model compression while		Median (FPGM), to compress the	the first being to adopt an end-	to explore their intrinsic	Comment:	computation graph of a CNN	spectral clustering. They
	keeping considerable performance, but also find a novel angle to interpret the		model regardless of those two	to-end stochastic training	connections and only count on	- Shows sign of MDS, attempting	without the need of performing	proposed a novel algorithm to
	model compression process.		requirements. Unlike previous	method that eventually forces	efficient groups. By self-	to provide a summary of the 4th	a computational difficult and not	interpret the network
	(3):		methods, FPGM compresses	the outputs of some channels	adaptions manners, the pruning	article (purple) and contrast	always useful task of making	compression process, and they
	Model pruning has become a useful technique that improves the computational		CNN models by pruning filters	being constant, and the second	operations can be done in few	with the main one	high-dimensional tensors of CNN	also found a novel angle for
	efficiency of deep learning, making it possible to deploy solutions on resource-		with redundancy, rather than	being to prune those constant	epochs to let the network		structured sparse. Their	interpret the compression
	limited scenarios. A widely-used practice in relevant work assumes that a		those with "relatively less"	channels from the original neural	gradually choose meaningful	despite the 1st yellow part	approach takes two stages: the	process.
	smaller- norm parameter or feature plays a less informative role at the inference time. In this paper, we propose a channel pruning technique for accelerating the		importance. When applied to two image classification	network by adjusting the biases of their impacting layers such	groups. According to this	came from the 1st article, the model was able to present it as	first being to adopt an end-to-	Comment: - Shows some sign of Mi
	computations of deep convolutional neural networks (CNNs), which does not		benchmarks, our method	that the resulting compact model	strategy, we not only achieve model compression while	not related to the main article	end stochastic training method that eventually forces the	attempting to summar
	critically rely on this assumption. Instead, it focuses on direct simplification of		validates its usefulness and	can be quickly fine-tuned.	keeping considerable		outputs of some channels being	multiple articles (green and
	the channel-to-channel computation graph of a CNN without the need of		strengths. FPGM reduces more	we first apply spectral clustering	performance, but also find a	stating FPGM as linked to the	constant, and the second being	@cite)
	performing a computational difficult and not always useful task of making high-		than 52 FLOPs on ResNet-110	on filters layer by layer to explore	novel angle to interpret the	other articles	to prune those constant	- However, content-wise, o
	dimensional tensors of CNN structured sparse. Our approach takes two stages:		without top-5 accuracy drop,	their intrinsic connections and	model compression process. A	other differes	channels from the original neural	the 2 nd article is covered
	the first being to adopt an end-to-end stochastic training method that		which has advanced the state-of-	only count on efficient groups. by			network by adjusting the biases	the 2 dithere is covered
	eventually forces the outputs of some channels being constant, and the second		the-art	self-adaption manners, the	work assumes that a smaller-		of their impacting layers such	
	being to prune those constant channels from the original neural network by		Comment:	pruning operations can be done	norm parameter or feature plays		that the resulting compact model	
	adjusting the biases of their impacting layers such that the resulting compact		- Copied the first tokens only	in few epochs to	a less informative role at the		can be quickly fine-tuned.	
	model can be quickly fine-tuned. Our approach is mathematically appealing		- No indication of MDS	Comment:	inference time. In this article, we		Comment:	
	from an optimization perspective and easy to reproduce. We experimented our			- Extracted sentences from the	propose the channel pruning		- Shows clear sign of MDS,	
	approach through several image learning benchmarks and demonstrate its			3 rd article (blue) plus another	technique for accelerating the		attempting to summarize the	
	interesting aspects and the competitive performance.			from the 2 nd (green) only	computations of deep		2 nd (green) and 3 rd articles	
	(4):			- No indication of MDS	convolutional Neural networks		(blue)	
	The success of CNNs in various applications is accompanied by a significant				(CNNs), which does not critically		- 4th article is regrettably not	
	increase in the computation and parameter storage costs. Recent efforts toward				rely on this assumption. Instead,		covered	
	reducing these overheads involve pruning and compressing the weights of				it focuses on direct simplification			
	various layers without hurting original accuracy. However, magnitude-based				of the channel-to-channel			
	pruning of weights reduces a significant number of parameters from the fully				computation graph of a CNN			
	connected layers and may not adequately reduce the computation costs in the				without the need of performing			
	convolutional layers due to irregular sparsity in the pruned networks. We				a computational difficult and not			
	present an acceleration method for CNNs, where we prune filters from CNNs				always useful task			
	that are identified as having a small effect on the output accuracy. By removing whole filters in the network together with their connecting feature maps, the				Comment: - Copied just the whole 2 nd			
	computation costs are reduced significantly. In contrast to pruning weights, this				article (green), then started			
	approach does not result in sparse connectivity patterns. Hence, it does not				copying from the 2 nd sentence			
	need the support of sparse convolution libraries and can work with existing				of the 3 rd article (blue).			
	efficient BLAS libraries for dense matrix multiplications. We show that even				- No indication of MDS			
	simple filter pruning techniques can reduce inference costs for VGG-16 by up to							
	34 and ResNet-110 by up to 38 on CIFAR10 while regaining close to the original							
	accuracy by retraining the networks.							
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No.	Abstracts	Label	Base LED	Large LED	Base Centrum	Tuned LED	Tuned Centrum	Two-step
831	(1): Learning to drive faithfully in highly stochastic urban settings remains an open	Multi-task learning (MTL) research shows the joint training of	Rouge scores:	Rouge scores: - Rouge 2:	Rouge scores: - Rouge 2:	Rouge scores: - Rouge 2:	Rouge scores: - Rouge 2:	Rouge scores: - Rouge 2:
		, ,	- Rouge 2:	•				•
	problem. To that end, we propose a Multi-task Learning from Demonstration	auxiliary related side-tasks along	0.0721 (prec)	0.0276 (prec)	0.0192 (prec)	0.0492 (prec)	0.0494 (prec)	0.0541 (prec)
	(MT-LfD) framework which uses supervised auxiliary task prediction to guide the	with the main task enhances the	0.0748 (recall)	0.0374 (recall)	0.0374 (recall)	0.028 (recall)	0.0374 (recall)	0.0561 (recall)
	main task of predicting the driving commands. Our framework involves an end-	training performance . MTL in	0.0734 (f-1)	0.0317 (f-1)	0.0254 (f-1)	0.0357 (f-1)	0.0426 (f-1)	0.055 (f-1)
	to-end trainable network for imitating the expert demonstrator's driving	neural networks has been	- Rouge L:	- Rouge L:	- Rouge L:	- Rouge L:	- Rouge L:	- Rouge L:
	commands. The network intermediately predicts visual affordances and action	successfully demonstrated in	0.1786 (prec)	0.1301 (prec)	0.0861 (prec)	0.1774 (prec)	0.1585 (prec)	0.1786 (prec)
	primitives through direct supervision which provide the aforementioned	many tasks previously including	0.1852 (recall)	0.1759 (recall)	0.1667 (recall)	0.1019 (recall)	0.1204 (recall)	0.1852 (recall)
	auxiliary supervised guidance. We demonstrate that such joint learning and	text-to-speech conversion,	0.1818 (f-1)	0.1496 (f-1)	0.1136 (f-1)	0.1294 (f-1)	0.1368 (f-1)	0.1818 (f-1)
	supervised guidance facilitates hierarchical task decomposition, assisting the	natural language processing ,	Summary:	Summary:	Summary:	Summary:	Summary:	Summary:
	agent to learn faster, achieve better driving performance and increases	speech processing and computer	Learning to drive faithfully in	learning to drive faithfully in	"Machine learning is the learning	In @cite, an end-to-end deep	Multi-task learning (MTL) @cite	In @cite, the authors proposed a
	transparency of the otherwise black-box end-to-end network. We run our experiments to validate the MT-LfD framework in CARLA, an open-source urban	vision . In the field of sequential decision making, @cite	highly stochastic urban settings remains an open problem. To	highly stochastic urban settings remains an open problem. this	of a mapping from situations to actions so as to maximize a	neural network is used to <mark>learn</mark> to play Atari 2600 Atari games	@cite aims to learn a mapping from situations to actions so as	multi-modal MTL method to train a neural network to imitate
	driving simulator. We introduce multiple non-player agents in CARLA and induce	demonstrate MTL for 3D game	that end, we propose a Multi-	paper describes a technique for	scalar reward or reinforcement	directly from sensory experience.	to maximize a scalar reward or	the steering angle and driving
	temporal noise in them for realistic stochasticity.	playing, @cite and @cite	task Learning from	using Multi-Modal Multi-Task	signal. The learner is not told	The network is trained to imitate	reinforcement signal. The learner	speed of a car. In @cite, the
	(2):	demonstrate MTL in 3D maze	Demonstration (MT-LfD)	learning that considers multiple	which action to take, as in most	the steering angle and driving	is not told which action to take,	authors proposed an end-to-end
	An artificial agent is developed that learns to play a diverse range of classic Atari	navigation task whereas @cite	framework which uses	behavioral modalities as distinct	forms of machine learning, but	speed of human control of a car.	as in most forms of machine	trainable network for imitating
	2600 computer games directly from sensory experience, achieving a	utilize the MTL framework for	supervised auxiliary task	modes of operation for an end-	instead must discover which	©cite proposed a multi-modal	learning, but instead must	the expert demonstrator's
	performance comparable to that of an expert human player; this work paves the	autonomous driving. Instead of	prediction to guide the main task	to-end autonomous deep neural	actions yield the highest reward	multi-task learning from	discover which actions yield the	driving commands. However,
	way to building general-purpose learning algorithms that bridge the divide	employing future control outputs	of predicting the driving	network utilizing the insertion of	by trying them. In the most	demonstration (MT-LfD)	highest reward by trying them. In	they do not provide a direct
	between perception and action.	as auxiliary tasks as shown by	commands. Our framework	modal information as secondary	interesting and challenging	framework to train an agent to	the most interesting and	supervision mechanism for the
	(3):	@cite , in this work we employ	involves an end-to-end trainable	input data for tasks with related	cases, actions may affect not	play Atari games.	challenging cases, actions may	agent to learn the driving
	Reinforcement learning is the learning of a mapping from situations to actions	action and visual abstractions to	network for imitating the expert	behaviors. using labeled data	only the immediate's reward, but	Comment:	affect not only the immediate's	commands, which is not the cas
	so as to maximize a scalar reward or reinforcement signal. The learner is not	guide the driving behavior.	demonstrator's driving	from hours of driving our fleet of	also the next situation, and	- Shows some sign of MDS,	reward, but also the next	in our case. Moreover, the
	told which action to take, as in most forms of machine learning, but instead	guide the driving behavior.	commands. The network	1 10th scale model cars, we	through that all subsequent	summarizing the 2 nd (green)	situation, and through that all	authors do not propose a
	must discover which actions yield the highest reward by trying them. In the		intermediately predicts visual	trained multiple neural networks	rewards. These two	and 4th (purple) articles.	subsequent rewards @cite.	method to induce temporal
	most interesting and challenging cases, actions may affect not only the		affordances and action primitives	to imitate the steering angle and	characteristics—trial-and-error	 However, there is some mix up 	Comment:	noise in the network. In contrast
	immediate's reward, but also the next situation, and through that all		through direct supervision which	driving speed of human control	search and delayed reward—are	about the networks for the two	- Summarized the 3 rd article only	in our work, we propose a
	subsequent rewards. These two characteristics—trial-and-error search and		provide the aforementioned	of a car.	the two most important	articles	- No indication of MDS	method that intermediately
	delayed reward—are the two most important distinguishing features of		auxiliary supervised guidance.	we show that in each case, our	distinguishing features of	- The model then mentions the	THE INCIDENCE OF THE	predicts the driving commands
	reinforcement learning.		We demonstrate that such joint	models trained with multi-modal	reinforcement learning." "In	1 st article (yellow) but		to guide the agent to achieve
	(4):		learning and supervised	multi-task learning can match or	recent years different lines of	erroneously treated it as a non-		better driving performance and
	Several deep learning approaches have been applied to the autonomous driving		guidance facilitates hierarchical	outperform multiple networks	evidence have led to the idea	main article (red @cite) and		increase transparency.
	task, many employing end-to-end deep neural networks. Autonomous driving is		task decomposition, assisting the	trained on individual tasks, while	that motor actions and	that it is used to play Atari		Comment:
	complex, utilizing multiple behavioral modalities ranging from lane changing to		agent to learn faster, achieve	using a fraction of the	movements in both vertebrates	games instead of driving (2nd		- Shows some sign of MD
	turning and stopping. However, most existing approaches do not factor in the		better driving performance and	parameters and having more	and invertebrates are composed	red part)		contrasting the main artic
	different behavioral modalities of the driving task into the training strategy. This		increases transparency of the	distinct mode of operation than	of elementary building blocks.			(yellow) with the other articles
	paper describes a technique for using Multi-Modal Multi-Task Learning that		otherwise black-box end-to	a network trained without multi -	The entire motor repertoire can			- However, the only other artic
	considers multiple behavioral modalities as distinct modes of operation for an		Comment:	modal multi- task learning on the	be spanned by applying a well-			explicitly mentioned is the 4
	end-to-end autonomous deep neural network utilizing the insertion of modal		- Copied the first tokens only	same data.	defined set of operations and			one (purple).
	information as secondary input data. Using labeled data from hours of driving		- No indication of MDS	Comment:	transformations to these			
	our fleet of 1 10th scale model cars, we trained multiple neural networks to			- Started from the 1st sentence of	primitives and by combining			
	imitate the steering angle and driving speed of human control of a car. We show			the 1st article (yellow), but then	them in many different ways			
	that in each case, our models trained with MTL can match or outperform			moved to copy from the 3rd	according to well-defined			
	multiple networks trained on individual tasks, while using a fraction of the			sentence of the 4th article	syntactic rules. Motor and			
	parameters and having more distinct modes of operation than a network			(purple)	movement primitives and			
	trained without MTL on the same multi-modal data. These results should			- Words in red also came from				
	encourage Multi-Modal MTL-style training with the insertion of Modal			the 4th article but from a later	neural, dynamic and kinematic			
	Information for tasks with related behaviors.			part	levels with complicated mapping			
	(5):			- No indication of MDS	among the elementary building			
	In recent years different lines of evidence have led to the idea that motor				blocks subserving these different			
	actions and movements in both vertebrates and invertebrates are composed of				levels of representation. Hence,			
	elementary building blocks. The entire motor repertoire can be spanned by				while considerable progress has			
	applying a well-defined set of operations and transformations to these				been made in recent years in			
	primitives and by combining them in many different ways according to well-				unravelling the nature of these			
	defined syntactic rules. Motor and movement primitives and modules might				primitives, new experimental,			
	exist at the neural, dynamic and kinematic levels with complicated mapping				computational			
	among the elementary building blocks subserving these different levels of				Comment:			
	representation. Hence, while considerable progress has been made in recent				- Copied from the 3rd (purple)			
	years in unravelling the nature of these primitives, new experimental,				and 5 th (orange) articles only			
	computational and conceptual approaches are needed to further advance our				- No indication of MDS			
	understanding of motor compositionality.							

No.	Abstracts	Label	Base LED	Large LED	Base Centrum	Tuned LED	Tuned Centrum	Two-step
845	(1):	A few extractive neural models	Rouge scores:	Rouge scores:	Rouge scores:	Rouge scores:	Rouge scores:	Rouge scores:
	We present a neural framework for opinion summarization from online product	have been recently applied to	- Rouge 2:	- Rouge 2:	- Rouge 2:	- Rouge 2:	- Rouge 2:	- Rouge 2:
	reviews which is knowledge-lean and only requires light supervision (e.g., in the	generic multi-document	0.0732 (prec)	0.0902 (prec)	0.0651 (prec)	0.1695 (prec)	0.1186 (prec)	0.1594 (prec)
	form of product domain labels and user-provided ratings). Our method	summarization. train a recursive	0.0889 (recall)	0.0815 (recall)	0.1037 (recall)	0.0741 (recall)	0.0519 (recall)	0.0815 (recall)
	combines two weakly supervised components to identify salient opinions and	neural network using a ranking	0.0803 (f-1)	0.0856 (f-1)	0.08 (f-1)	0.1031 (f-1)	0.0722 (f-1)	0.1078 (f-1)
	form extractive summaries from multiple reviews: an aspect extractor trained	objective to identify salient	- Rouge L:	- Rouge L:	- Rouge L:	- Rouge L:	- Rouge L:	- Rouge L:
	under a multi-task objective, and a sentiment predictor based on multiple	sentences, while follow-up work	0.1394 (prec)	0.1707 (prec)	0.1157 (prec)	0.3333 (prec)	0.2167 (prec)	0.2429 (prec)
	instance learning. We introduce an opinion summarization dataset that includes	@cite employs a multi-task	0.1691 (recall)	0.1544 (recall)	0.1838 (recall)	0.1471 (recall)	0.0956 (recall)	0.125 (recall)
	a training set of product reviews from six diverse domains and human-	objective to improve sentence	0.1528 (f-1)	0.1622 (f-1)	0.142 (f-1)	0.2041 (f-1)	0.1327 (f-1)	0.165 (f-1)
	annotated development and test sets with gold standard aspect annotations,	extraction, an idea we adapted to	Summary:	Summary:	Summary:	Summary:	Summary:	Summary:
	salience labels, and opinion summaries. Automatic evaluation shows significant	our task. propose a graph	We present a neural framework	we present a neural framework	We present a neural framework	In the context of multi-document	There is a large body of work on	In the context of summarization,
	improvements over baselines, and a large-scale study indicates that our opinion	convolution network to represent	for opinion summarization from	for opinion summarization from	for opinion summarization from	summarization, R2N2 @cite is a	multi-document summarization,	@cite employ a Graph
	summaries are preferred by human judges according to multiple criteria.	sentence relations and estimate	online product reviews which is	online product reviews which is	online product reviews which is	recurrent neural network (RNN)	including @cite @cite, @cite and	Convolutional Network (GCN) on
	(2):	sentence salience. Our	knowledge-lean and only	knowledge-lean and only	knowledge-lean and only	for extracting salience labels. The	@cite. However, most of these	the relation graphs, with
	The specification discloses a luggage carrier made up of a generally U-shaped	summarization method is tailored	requires light supervision (e.g., in	requires light supervision (e.g., in	requires light supervision (e.g., in	RNN is trained on sentence	works focus on extracting	sentence embeddings obtained
	frame. The frame has two spaced legs with a hook on the front which hooks	to the opinion extraction task, it	the form of product domain	the form of product domain	the form of product domain	relation graphs, and the salience	features from a single review. In	from Recurrent Neural Networks
	over the bumper of an automobile. Two braces are attached to the cross	identifies aspect-specific and	labels and user-provided ratings).	labels and user-provided	labels and user-provided ratings).	labels are extracted using a	this work, we focus on extractive	as input node features for
	member of the U-shaped member and the front portion of the braces is	salient units, while minimizing the	Our method combines two	ratings).	Our method combines two	greedy heuristic to extract salient	summaries from multiple	salience estimation. However,
	received on fastening means welded to the under side of the car frame. The	redundancy of the final summary	weakly supervised components	our method combines two	weakly supervised components	sentences while avoiding	reviews: an aspect extractor	they do not consider sentence
	cross members provide a supporting surface for carrying articles, boats and the	with a greedy selection algorithm	to identify salient opinions and	weakly supervised components	to identify salient opinions and	redundancy @cite @cite. In this	trained under a multi-task	relation graphs and do not
	like. A platform may be supported on the frame.	@cite @cite . Redundancy is also	form extractive summaries from	to identify salient opinions and	form extractive summaries from	work, we use the RNN to extract	objective, and a sentiment	consider the representation
	(3):	addressed in who propose a	multiple reviews: an aspect	form extractive summaries from	multiple reviews: an aspect	salience labels from product	predictor trained based on	power of deep neural networks.
	We develop a Ranking framework upon Recursive Neural Networks (R2N2) to	graph-based framework for	extractor trained under a multi-	multiple reviews : an aspect	extractor trained under a multi-	<mark>reviews</mark> .	multiple instance learning.	In contrast, we use salience
	rank sentences for multi-document summarization. It formulates the sentence	abstractive summarization.	task objective, and a sentiment	extractor trained under a multi-	task objective, and a sentiment	Comment:	Comment:	labels and salience labels to
	ranking task as a hierarchical regression process, which simultaneously	introduce an encoder-decoder	predictor based on multiple	task objective, and a sentiment	predictor based on multiple	- Shows clear sign of MDS,	- Shows some sign of MDS, with	identify salient opinions and
	measures the salience of a sentence and its constituents (e.g., phrases) in the	neural method for extractive	instance learning. We introduce	predictor based on multiple	instance learning. We introduce	summarizing the 3 rd (blue) and	the model summarizing what	form extractive summaries from
	parsing tree. This enables us to draw on word-level to sentence-level	opinion summarization. Their	an opinion summarization	instance learning.	an opinion summarization	4th (purple) articles, while	the main article does (yellow),	multiple reviews.
	supervisions derived from reference summaries. In addition, recursive neural networks are used to automatically learn ranking features over the tree, with	approach requires direct supervision via gold-standard	dataset that includes a training set of product reviews from six	we introduce an opinion summarization dataset that	dataset that includes a training set of product reviews from six	clearly contrasting the main article (yellow).	and trying to contrast that with other literature (red)	Comment: - Shows some sign of MDS, the
	hand-crafted feature vectors of words as inputs. Hierarchical regressions are	extractive summaries for training.	diverse domains and human-	includes a training set of product	diverse domains and human-	- The RNN notation proved	- However, the red part is	model summarizing what the
	then conducted with learned features concatenating raw features. Ranking	in contrast to our weakly	annotated development and test	reviews from six diverse domains	annotated development and test	slightly confusing for the model	actually not factually based,	main article does (yellow), and
	scores of sentences and words are utilized to effectively select informative and	supervised formulation.	sets with gold standard aspect	and human-annotated	sets with gold standard aspect	though, the 2 nd article used	and the phrase "a large body of	trying to contrast that with
	non-redundant sentences to generate summaries. Experiments on the DUC	Supervised formulation.	annotations, salience labels, and	development and test sets with	annotations, salience labels, and	"Recursive Neural Network",	work" is probably picked up	other literature (purple)
	2001, 2002 and 2004 multi-document summarization datasets show that R2N2		opinion summaries. Automatic	gold standard aspect	opinion summaries. Automatic	not "Recurrent Neural	from the summarization	- However, the red-and-purple
	outperforms state-of-the-art extractive summarization approaches.		evaluation shows significant	annotations, salience labels, and	evaluation shows significant	Network"	training.	part contains erroneous facts.
	(4):		improvements over baselines,	opinion summaries.	improvements over baselines,	-The 2 nd article appears		The model wrongly assumes
	We propose a neural multi-document summarization (MDS) system that		and a large-scale study indicates	a large-scale study indicates that	and a large-scale study indicates	completely unrelated to the		that the 4 th article did not look
	incorporates sentence relation graphs. We employ a Graph Convolutional		that our opinion summaries are	our opinion summaries are	that our opinion summaries are	task, and the model probably		at sentence relation graphs
	Network (GCN) on the relation graphs, with sentence embeddings obtained		preferred by human judges	preferred by human judges	preferred by human judges	correctly omits it.		when the authors explicitly say
	from Recurrent Neural Networks as input node features. Through multiple layer-		according to multiple	according to multiple criteria.	according to multiple criteria.			they did.
	wise propagation, the GCN generates high-level hidden sentence features for		criteria. The specification	Comment:	The specification discloses a			
	salience estimation. We then use a greedy heuristic to extract salient sentences		discloses a luggage carrier made	- Copied the first tokens only,	luggage carrier made up of a			
	while avoiding redundancy. In our experiments on DUC 2004, we consider three		up of a generally U-shaped	except that the phrase	generally U-shaped frame. The			
	types of <mark>sentence relation graphs</mark> and demonstrate the advantage of combining		frame. The frame has two spaced		frame has two spaced legs with a			
	sentence relations in graphs with the representation power of deep neural		legs with a hook on the front	significant improvements over	hook on the front which hooks			
	networks. Our model improves upon traditional graph-based extractive		which hooks over the bumper of	baselines, and" is skipped	over the bumper of an			
	approaches and the vanilla GRU sequence model with no graph, and it achieves		an automobile	before the red part	automobile. Two braces are			
	competitive results against other state-of-the-art multi-document		Comment:	- No indication of MDS	attached to the cross member of			
	summarization systems.		- Copied the first tokens only		the U-shaped member and the			
			- No indication of MDS		front portion of the braces is			
					received on fastening means			
					welded to the under side of the			
					car frame. The cross members			
					provide a supporting surface for			
					carrying articles, boats and the			
					like. A platform may			
					Comment:			
					Copied the first tokens onlyNo indication of MDS			
					140 malcadon or MD3			
		1	1		1		1	

No.	Abstracts	Label	Base LED	Large LED	Base Centrum	Tuned LED	Tuned Centrum	Two-step
1165	(1): In the age of social news, it is important to understand the types of reactions	As we noted above, most studies that examine misinformation	Rouge scores: - Rouge 2:	Rouge scores: - Rouge 2:	Rouge scores: - Rouge 2:	Rouge scores: - Rouge 2:	Rouge scores: - Rouge 2:	Rouge scores: - Rouge 2:
	that are evoked from news sources with various levels of credibility. In the	spread focus on individual events	0.0364 (prec)	0.0071 (prec)	0.028 (prec)	0.0156 (prec)	0.0182 (prec)	0.0129 (prec)
	present work we seek to better understand how users react to trusted and	such as natural disasters @cite ,	0.0588 (recall)	0.0098 (recall)	0.0588 (recall)	0.0098 (recall)	0.0196 (recall)	0.0196 (recall)
	deceptive news sources across two popular, and very different, social media	political elections @cite , or crises	0.0449 (f-1)	0.0083 (f-1)	0.038 (f-1)	0.012 (f-1)	0.0189 (f-1)	0.0156 (f-1)
	platforms. To that end, (1) we develop a model to classify user reactions into	@cite and examine the response	- Rouge L:	- Rouge L:	- Rouge L:	- Rouge L:	- Rouge L:	- Rouge L:
	one of nine types, such as answer, elaboration, and question, etc, and (2) we	to the event on social media. A	0.1084 (prec)	0.0993 (prec)	0.093 (prec)	0.1385 (prec)	0.0991 (prec)	0.0769 (prec)
	measure the speed and the type of reaction for trusted and deceptive news	recent study by Vosoughi al found	0.1748 (recall)	0.1359 (recall)	0.1942 (recall)	0.0874 (recall)	0.1068 (recall)	0.1165 (recall)
	sources for 10.8M Twitter posts and 6.2M Reddit comments. We show that	that news stories that were fact-	0.1338 (f-1)	0.1148 (f-1)	0.1258 (f-1)	0.1071 (f-1)	0.1028 (f-1)	0.0927 (f-1)
	there are significant differences in the speed and the type of reactions between	checked and found to be false	Summary:	Summary:	Summary:	Summary:	Summary:	Summary:
	trusted and deceptive news sources on Twitter, but far smaller differences on	spread faster and to more people	In the age of social news, it is	social media have become an	In the age of social news, it is	In the context of crisis	In the past few years, there has	@cite use epidemiological
	Reddit.	than news items found to be true.	important to understand the	established feature of the	important to understand the	informatics, @cite and @cite use	been a growing interest in	models to characterize
	(2):	In contrast, our methodology	types of reactions that are	dynamic information space that	types of reactions that are	epidemiological models to	studying information diffusion on	information diffusion on social
	Social media have become an established feature of the dynamic information	considers immediate reactions to	evoked from news sources with	emerges during crisis events.	evoked from news sources with	characterize information	social media. For example, @cite	platforms like Twitter. They use
	space that emerges during crisis events. Both emergency responders and the	news of varying credibility, so we	various levels of credibility. In the	both emergency responders and	various levels of credibility. In the	cascades in Twitter resulting	used epidemiological models to	the SEIZ enhanced epidemic
	public use these platforms to search for, disseminate, challenge, and make	can determine whether certain	present work we seek to better	the public use these platforms to	present work we seek to better	from both news and rumors. In	characterize information	model that explicitly recognizes
	sense of information during crises. In these situations rumors also proliferate,	reactions or reactions to trusted	understand how users react to	search for, disseminate,	understand how users react to	@cite, the authors use the SEIZ	cascades in Twitter resulting	skeptics to characterize eight
	but just how fast such information can spread is an open question. We address	or deceptive news sources evoke	trusted and deceptive news	challenge, and make sense of	trusted and deceptive news	enhanced epidemic model that	from both news and rumors.	events across the world and
	this gap, modeling the speed of information transmission to compare	more or faster responses from	sources across two popular, and	information during crises. in	sources across two popular, and	explicitly recognizes skeptics to	@cite studied the spread of	spanning a range of event types.
	retransmission times across content and context features. We specifically	social media users.	very different, social media	these situations rumors also	very different, social media	characterize eight events across	misinformation on Twitter during	They do not explicitly recognize
	contrast rumor-affirming messages with rumor-correcting messages on Twitter		platforms. To that end, (1) we	proliferate, but just how fast	platforms. To that end, (1) we	the world and spanning a range	the 2017 French presidential	skeptics to characterize events in
	during a notable hostage crisis to reveal differences in transmission speed. Our		develop a model to classify user	such information can spread is	develop a model to classify user	of event types. They	election. They collected a	Twitter, and they do not consider
	work has important implications for the growing field of crisis informatics.		reactions into one of nine types,	an open question.	reactions into one of nine types,	demonstrate that their approach	massive Twitter dataset of nearly	the impact of rumors on the
	(3):		such as answer, elaboration, and	we address this gap by modeling	such as answer, elaboration, and	is accurate at capturing diffusion	17 million posts, posted between	spread of information diffusion
	Characterizing information diffusion on social platforms like Twitter enables us		question, etc, and (2) we	the speed of information	question, etc, and (2) we	in crisis informatics.	27 April and 7 May 2017	in Twitter. @cite study the use of
	to understand the properties of underlying media and model communication		measure the speed and the type	transmission to compare	measure the speed and the type	Comment:	(Election Day). They then set to	bots in the 2016 French
	patterns. As Twitter gains in popularity, it has also become a venue to broadcast		of reaction for trusted and	retransmission times across	of reaction for trusted and	- Shows no sign of MDS, with the	study the activities of the two	presidential election. They found
	rumors and misinformation. We use epidemiological models to characterize		deceptive information sources	content and context features.	misleading news sources for	model just summarizing the 3 rd	groups independently, as well as	anomalous account usage
	information cascades in twitter resulting from both news and rumors.		for 10.8M Twitter posts and	we use epidemiological models	10.8M Twitter posts and 6.2M	article	their interplay. They provide a	patterns suggest the possible
	Specifically, we use the SEIZ enhanced epidemic model that explicitly recognizes		6.2M Reddit comments. We	to characterize information	Reddit comments. We show that	- Maybe this have something to	characterization of both the bots	existence of a black market for
	skeptics to characterize eight events across the world and spanning a range of		show that there are significant	cascades in twitter resulting from	there are significant differences	do with how the 1st article (i.e.	and the users who engaged with	reusable political disinformation
	event types. We demonstrate that our approach is accurate at capturing		differences in the speed, the	both news and rumors to	in the speed and a type of	the main one) is not clear what	them, and oppose it to those	bots, as well as their interplay
	diffusion in these events. Our approach can be fruitfully combined with other		type of reactions between	characterize eight events across	reactions between trusted and	it does?	who didn't.	with the users who engaged with
	strategies that use content modeling and graph theoretic features to detect		trusted and deceptive sites on	the world and spanning a range	deceptive News sources on		Comment:	them, and the users who had no
	(and possibly disrupt) rumors.		Twitter, but far smaller	of event types.	Twitter, but far smaller		- Shows some sign of MDS, with	engaged with them. The authors
	(4): Recent accounts from researchers, journalists, as well as federal investigators,		differences on Reddit. Social	specifically, we contrast rumor-	differences on Reddit. Social		the model summarizing the 3 rd	of @cite found that the users who did engage with the bots
	reached a unanimous conclusion: social media are systematically exploited to		media have become an established feature of the	affirming messages with rumor-	media has become an established feature of the		(blue) and 4 th (purple) articles	are mostly foreigners, rather
	manipulate and alter public opinion. Some disinformation campaigns have been		dynamic information space that	during a notable hostage crisis to	dynamic information space that		 The main article is probably not mention because it does not 	than French users with diverse
	coordinated by means of bots, social media accounts controlled by computer		emerges during crisis events.	reveal differences in transmission	emerges during crisis events.		include much detail? The 2 nd	political views, and that the bots
	scripts that try to disguise themselves as legitimate human users. In this study,		Both emergency responders and	speed.	Both emergency responders and		article is also highly abstract	who engaged with the bots have
	we describe one such operation that occurred in the run up to the 2017 French		the public use these platforms to	our work has important	the public use these platforms to		article is also riigiliy abstract	diverse political views.
	presidential election. We collected a massive Twitter dataset of nearly 17 million		search for, disseminate,	implications for the growing field	search for, disseminate,			Comment:
	posts, posted between 27 April and 7 May 2017 (Election Day). We then set to		challenge, and make sense of	of crisis informatics.	challenge, and make sense of			- Shows some sign of MDS, witl
	study the MacronLeaks disinformation campaign: By leveraging a mix of		Comment:	Comment:	information during crises. In			the model summarizing the 3 ^r
	machine learning and cognitive behavioral modeling techniques, we separated		- Copied the first tokens only	- Extracted and re-arranged	these situations rumors also			(blue) and 4th (purple) articles
	humans from bots, and then studied the activities of the two groups		- No indication of MDS	sentences from the 2 nd (green)	proliferate, but just how fast			- Summarization is more clums
	independently, as well as their interplay. We provide a characterization of both			and 3 rd (blue) articles only	such information can spread is			than Centrum
	the bots and the users who engaged with them, and oppose it to those users			- No indication of MDS	an open question. We address			- The 2017 French election is
	who didn't. Prior interests of disinformation adopters pinpoint to the reasons of				this gap, modeling the speed of			wrongly changed to 2016 (red
	scarce success of this campaign: the users who engaged with MacronLeaks are				information transmission to			despite 2016 is not mentioned
	mostly foreigners with pre-existing interest in alt-right topics and alternative				compare retransmission times			anywhere else in the inputs
	news media, rather than French users with diverse political views. Concluding,				across content and context			
	anomalous account usage patterns suggest the possible existence of a black				features. We specifically contrast			
	market for reusable political disinformation bots.				rumor-affirming messages with			
					Comment:			
					- Copied the first tokens only			
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As an all agreements in severy real and severy	No.	Abstracts	Label	Base LED	Large LED	Base Centrum	Tuned LED	Tuned Centrum	Two-step
Secure desiration of the desiration of desiration of special control country and a contr	4263	(1) :	Besides @cite , there are also	Rouge scores:	Rouge scores:	Rouge scores:	Rouge scores:	Rouge scores:	Rouge scores:
seed the property of the common control of t		Classical algorithms for query optimization presuppose the absence of	several works that automatically	- Rouge 2:	- Rouge 2:	- Rouge 2:	- Rouge 2:	- Rouge 2:	- Rouge 2:
Controlling between the control production and control productions are of the control production		inconsistencies or uncertainties in the database and exploit only valid semantic	1 '	0.0231 (prec)		. ,	, ,		" '
Angel In company to design it files you controlled as a complaint or company to design it files you controlled as a complaint of the company		knowledge provided, e.g., by integrity constraints. Data inconsistency or	dynamic) constraints for SQO	0.0755 (recall)	0.0189 (recall)	, ,	0.0377 (recall)	0.1132 (recall)	1
Assistant and particulated or event design for the control of program of the control of the cont		uncertainty, however, is a widespread critical issue in ordinary databases: total	@cite @cite @cite , but this	0.0354 (f-1)	0.0187 (f-1)	0.0292 (f-1)	0.0286 (f-1)	0.0543 (f-1)	0.0328 (f-1)
Approximation from the control		integrity is often, in fact, an unrealistic assumption and violations to integrity	semantic knowledge is used only	- Rouge L:	- Rouge L:	1		- Rouge L:	- Rouge L:
Secretary and se		constraints may be introduced in several ways. In this report we present an	as long as it is true, and then	0.0747 (prec)	0.0909 (prec)	0.0676 (prec)	0.1136 (prec)	0.1006 (prec)	0.0677 (prec)
Section 1 in the process of the company of the comp			either updated or discarded, so	0.2407 (recall)	0.0926 (recall)	0.2778 (recall)	0.1852 (recall)	0.3148 (recall)	0.2407 (recall)
Secretary Country on the Secretary Production Country of Secretary Country		ones, relies on not necessarily valid semantic knowledge, e.g., provided by	that the information inferred from	0.114 (f-1)	0.0917 (f-1)	0.1087 (f-1)	0.1408 (f-1)	0.1525 (f-1)	0.1057 (f-1)
control processors the transaction compared to the transaction compared to the compared of the		violated or soft integrity constraints, or induced by applying data mining	the database by using it is correct.	Summary:	Summary:	Summary:	Summary:	Summary:	Summary:
where of intervalence to an accordance of the provided of the same interval interval of the provided of the same interval interval of the provided of the same interval interv		techniques. Query optimization that leverages invalid semantic knowledge		Classical algorithms for query	an approach to learning query-	Classical algorithms for query	Semantic query optimization has	There is a large body of work on	In @cite, a rule deriver is used to
and the composition of the sector without the processed of the sector with the sector of the composition of		cannot guarantee the semantic equivalence between the original user's query		optimization presuppose the	transformation rules based on	optimization suppose the	also been studied in the context	semantic query optimization	direct the search for rules that
respected on the control of this control of the con		and its rewriting: thus a query optimized by our approach yields approximate		absence of inconsistencies or	analyzing the existing data in the	absence of inconsistencies or	of data mining @cite @cite. The	@cite @cite. In @cite, the	may be true only in the current
workside products, a part of the many color of the common content of the many color of the common content of the many color of the common color of the common color of the common color of the color of		answers that can be provided to the users whenever fast but possibly partial		uncertainties in the database	database is proposed.	uncertainties in the database	authors in @cite proposed a	authors present a framework for	state of the database. In
the survey constraints, obtained to the processor of particles of the control of		responses are required. Also, we evaluate the impact of use of invalid semantic		and exploit only valid semantic	a framework and a closure	and exploit only valid semantic	framework for learning query-	learning query-transformation	contrast, our approach uses
the survey constraints, obtained to the processor of particles of the control of		knowledge in the rewriting of a query by computing a measure of the quality of		knowledge provided, e.g., by	algorithm for learning rules from	knowledge provided, e.g., by	transformation rules based on	rules based on analyzing the	intermediate results from the
Accordance of the season of personnel or present of possible consistion in the sensantic bull but or working. The accordance of the present of possible consistion in the sensantic bull but or working. The accordance of the present					a given data distribution are				optimization process to guide
however, as andeparted mixed state in the recording. The process of the process o		, , , , , , , , , , , , , , , , , , , ,			•	" '			
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Accepted for the formation of the complete position with a complete position with a complete position with a complete position of the complete pos		* *				1			
wisidation to integrity constraints, and the same present work of the same present with				1 9 ,		• ' '	•	• • •	
may be introduced in several ways. In this growth contrasts, the total point of the several ways, in this growth operator as presented of the several ways, in this growth operator as the several ways, in the growth operator as the growth op				'	The state of the s	· ·			
acquired two-criticals in the form of constantials, which perfect specified in fall or manners are to be enforced on the additional transport was manner or the constantial and approach for memority deep optimization that, differently continuation t				j ,					
be enforced for all database states, others are known to be valid for the same proposal for remains cuery optimization that differently into the station and control of the same proposal for the same				l .		'			· ·
commandor hat, differently contracted service is activated and an expectation of the extension of the extens				1		1			
where the latter are called dynamic integrity constraints. Some students in the traditional ones, relies on not necessarily valid semanted: on not necessarily valid semanted: on not necessarily valid semanted: throwledge, eff., provided by the constraints, or induced by constraints, or induced by constraints, or induced by proposed and the provided provided provided provided by constraints, or induced by proposed and the provided provided provided provided provided provided by constraints, or induced by provided by the provided provid		· · · · · · · · · · · · · · · · · · ·		''	- No indication of MDS				
which certain syvamic examatic onto inecessarily valid semantic scenarios. Children in accordance and a part of the contract to off controlling syraphic con				'					
showledge, G., provided by violated or soft integrity or contraints. The concept of formula fooder feelinging producted or soft integrity or contraints, or induced by violated or soft integrity or soft integrit				· · · · · · · · · · · · · · · · · · ·		1			
Interactive tool for identifying potential state integrity constraints, to industed by a section of the state						1			· ·
of minute two-ledge last is introduced, and jumphous of minute the maintain the two-ledge last is processed. An algorithm to compare the complete restrictions, principating data mining techniques. A pull-line growth and complete last processed. An algorithm to compare the complete restrictions, principating last principal data manufacturined and complete last presented. All complete the proposed algorithms are characterised and complete last presented. All composed is the composed is the complete last presented. All composed is the composed is							•		, ,
applying data mining techniques. Special can all designate extinctions, on a page set of control to the special can be applying data mining techniques. Query optimization that restrictions, joint predictate for given in a queryl, and contraints is given. > lower optimization that the control to the control to the course of the control to the control to the course of the course				,		· ·	_		
selection features, completeness, completene						· ·	· · · · · · · · · · · · · · · · · · ·		
restrictions, join predicties (ag few in a query), and constraints is given. > (3): An approach to learning query randomation ruise based on analyzing the senance equivalence between the database are prouded to have detailed example a prouded to data min ling is on the traditional query processing costs. The correctness, completioness, and complexity of the proposed algorithm to the original used for an approach. A framework and a closure algorithm the database is proposed. A framework and a closure algorithm the correctness, completioness, and complexity of the proposed algorithm to correct of manufacture algorithm to the original used to the correctness. The correctness is a provided to the correctness of the correctness				,		111 -			_
As approach to learning query transformation rules based on analyzing the extractive data and cause allower agreement equivalence between the original user's query and its rewritten; thus a query optimized to for learning query transformation rules based on analyzing the extractive data in the database is proposed. A framework and a closure algorithm for learning query transformation rules based on analyzing the extractive data in the database is proposed. A framework and a closure algorithm for learning query transformation for learning query transformation for learning query transformation and extractive the many areas of computer science, for the complete that the provided to the users whenever for the complete that the provided to the users whenever for the complete that the provided to the users whenever for the complete that the provided to the users whenever for the complete that the provided to the users whenever for the complete that the provided to the users whenever for the complete that the provided to the users whenever for the complete that the provided to the users whenever for the complete that the provided to the users whenever for the users whenever for the users whenever for the provided to the users whenever for the users whenever the users whenever for the users whenever for the users wheneve				1			•		
An approach to learning query-transformation rules based on analyting the soliting data in the disables or proposed. A first movement and a closure of learning rules from a given data distribution are described, The correctness completeness, and complexing of the proposed all gladrithm are characterized and a detailed exemple is provided to illustrate the finance where the users without the service of the provided rule users without on are described, and a provided glosure is presented. An approximate answers that can be provided to the users without possibly partial to in many areas of computers science. The use of inference rules to support in the following important tool in many areas of computers science. In disabase systems, rules are explicitly promoted to the users with event of the provided rule users with the users with event of the provided rule service in disabase systems, rules are explicitly from the computer the test of the disable of the provided rule service in disables and the ability of the provided rule service in disables and the ability of the provided rule service in disables and the ability of the provided rule service in disables and the ability of the provided rule service in disables and the provided rule service in the disables of the provided rule service in disables and the service of a system many areas of computers decreasing to the test of the disables and the provided rule service in disables and the service of a system many areas of computers decreasing the test of the disables and the service of a system many in the current tool in the disable of the provided rule service in disables and the service of a system manufacture				_			•		- · ·
usting data in the database is proposed. A framework and a closure algorithm for learning rules from a gave and a distribution are described. The commentation are described. The commentation are described. The commentation are described and a distribution are described. The commentation are described and the describing of the commentation are described. The commentation are described and the describing of the commentation are described. The commentation are described and the describing of the commentation are described. The commentation are described and the describing of the commentation are described. The commentation are described and the describing of the commentation are described. The commentation are described and the describing of the commentation are described. The commentation are described and the describing of the commentation are described. The commentation are described and the describing of the commentation are described. The commentation are described and the describing of the commentation are described. The commentation are described and the describing of the commentation are described. The commentation are described and the describing of the commentation are described. The commentation are described and the described and the described and the described and the described a		(3):		knowledge cannot guarantee the		algorithm are characterized and	piece of information, i.e. that	that future queries <mark>can b</mark>	However, the method to
for learning rules from a given data distribution are described. The correctness, and complexity of the proposed algorithm are can exterted and by Our approach yields a potential to a proposal processing is an entelligent deap processing deap processing deap product to be users whenever feat but possibly partial in disabase systems, rules are used in semantic query optimization as a method for reducing query processing costs. The savings is dependent on the ability of separate by these rules. Unfortunately, the most useful rules are not always those that would or could be specified by an expert. This paper describes the architecture of a system having two interrelated components: a combined conventional semantic query optimizer, and an extension of the 2 nd program and a processing of the context (pellow). In this paper describes the architecture of a system while two interrelated of the production method as program and an extension of the processing of the production method as program and an extension of the processing of the production of the production of the production of the processing of the production of the processing of the production of the pro				semantic equivalence between		· ·		processed more efficiently. The	maintain knowledge base is not
completeness, and complexity of the proposed alignments are characterized and additional complexity provided to fill future the firmwork; > (a): In each of the complex provided to fill future the firmwork; > (a): In each of the complex provided to fill future the firmwork; > (a): In crossingly important tool in many areas of computer science. In database systems, rules are restriction, spring approach tool in many areas of computer science. In database systems, rules are valued in semantic query optimization as a method for reducing query processing costs. The savings is dependent on the ability of experts to supply a set of sectificition, spring and constraints in the restriction of the optimizer to quickly find the appropriate transformations generated by these rules. Unfortunately, the most useful rules and the ability of the answer returned components: a combined conventional semantic query optimization as method for reducing query processing costs. The savings is dependent on the ability of experts to supply a set of useful rules and the ability of the optimizer to quickly find the appropriate transformations generated by these rules. Unfortunately, the most useful rules and the ability of the answer returned components: a combined conventional semantic query optimizer, and an extension of the political role of t		existing data in the database is proposed. A framework and a closure algorithm		the original user's query and its		illustrate the framework. > <mark>The</mark>	traditional (i.e. previously seen)	concept of minimal knowledge	presented in this paper. The
adetalled example is provided to illustrate the framework. (4): (4): (5): In use of inference rules to support intelligent data moressing is an algorithm to compute the impact of the provided to the users whenever fast but possibly partial responses are required. Also, we used in semantic query systems, rules are used in semantic query systems, rules are used in semantic query protessing costs. The savings is dependent on the ability of experts to support as of fuseful rules and the ability of the optimizer to quickly find the useful rules are not always those that would or could be specified by an expert. Comment: 1		for learning rules from a given data distribution are described. The correctness,		rewriting: thus a query optimized		use of inference rules to support	methods	base is introduced, and a	authors present an approach to
4 : The use of inference rules to support intelligent data processing is an increasingly important tool in many areas of computer science. In database systems, rules are used in semantic query optimization as a method for reducing query processing costs. The savings is dependent on the ability of experts to supply a set of useful rules are not always those that would or could be specified by an expert. This paper describes the reducing query processing costs. The savings is dependent on the ability of experts to supply a set of useful rules are not always those that would or could be specified by an expert. The savings is dependent on the compounding a measure of the compounding a measure of the compounding an expert of the answer returned comment: - Components a combined conventional semantic query optimizarion as a method for reducing query processing costs. The savings is dependent on the ability of experts to supply a set of useful rules are not always those that would or could be specified by an expert. - Comment: - Copied the first tokens only capability can derive rules that may be true only in the current state of the uniform and the ability of the architecture of a system employing only user-specified rules, a system with an automatic to dediver. Our automatic rule deriver to a components and can modify the rule set to reflect changes in the database and its of such as a set of contrast with the rule set or reflect changes in the database and its of the processing costs. - Comment: - Copied the rule of the contrast with a set of the save returned to the processing costs. - The savings is dependent on the ability of experts to supply a set of such that would or could be specified by a set of the save returned to the processing costs. - Shows clear sign of MDS, with the properties of the processing costs. - Comment: - Copied the rule set or reflect changes in the database and its such as the processing costs. - The 1st reducing query processing costs. - The savings is dependent on the abil		completeness, and complexity of the proposed algorithm are characterized and		by our approach yields		intelligent data processing is an		method to maintain the	acquiring knowledge from
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responses are required. Also, we evaluate the impact of use of systems, rules are used in semantic query optimization as a method for reducing query processing costs. The savings is dependent on the ability of experts to upuckly find the appropriate transformations generated by these rules. Unfortunately, the most useful rules and the ability of the optimizer to quickly find the appropriate transformations generated by these rules. Unfortunately, the most useful rules are not always those that would or could be specified by an expert. Supply as expert of the quality of the answer returned components: a combined conventional semantic query optimizer, and an automatic rule derives compared by these rules. Unfortunately, the most useful rules are not always those that would or could be specified by an expert. Supply as experts of the quality of the answer returned components: a combined conventional semantic query optimizer, and an automatic rule derives components are motivated or provided the search for learning new rules. Unfortunately, the most useful rules are not always those that was during the context (yellow). In the provided of the provided provid		(4):		provided to the users whenever		many areas of computer science.		algorithm to compute the	which is based on the notion of
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automatic rule deriver. Our automatic rule derivation method uses intermediate results from the optimization process to direct the search for learning new rules. I on indication of MDS 4th (red) articles while ment useful rules are not always those that to rules are not always those that would or could be specified by an expert. This paper describes that implementation, and show how semantic query optimization in this context. - No indication of MDS 4th (red) articles while ment useful rules are to reflect the search for learning new rules. 4th (red) articles while ment useful rules are to reflect the search for learning new rules. 4th (red) articles while ment useful rules are not always those that would or could be specified by an expert. This paper describes that would or could be specified by an expert. This paper describes that would or could be specified by an expert. This paper describes that would or could be specified by an expert. This paper describes that would or could be specified by an expert. This paper describes that would or could be specified by an expert. This paper describes that rule with facts from the 40 one of the 40 in the fact of the 40 in the context. - The 1st red part character with the attention in gradient and the part contrast with the main article but wrongly mixe attention on the state of the 40 in the context of a system with an automatic would or could be specified by an expert. This paper describes that the up with facts from the 40 one of the 40 in the context of 40 in the 40 in the context of 40 in the 40 in the context of 40 in the 4		· · · ·		- Copied the first tokens only		appropriate transformations		-	_
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) .	Abstracts	Label	Base LED	Large LED	Base Centrum	Tuned LED	Tuned Centrum	Two-step
'1	(1):	Similar to XRANK @cite is the	Rouge scores:	Rouge scores:	Rouge scores:	Rouge scores:	Rouge scores:	Rouge scores:
	In contrast to XML query languages as e.g. XPath which require knowledge on	stack-based approach presented	- Rouge 2:	- Rouge 2:	- Rouge 2:	- Rouge 2:	- Rouge 2:	- Rouge 2:
	the query language as well as on the document structure, keyword search is	in @cite . In contrast to the	0.0244 (prec)	0.0 (prec)	0.0061 (prec)	0.0429 (prec)	0.125 (prec)	0.04 (prec)
	open to anybody. As the size of XML sources grows rapidly, the need for efficient	previous stack-based appraoches,	0.069 (recall)	0.0 (recall)	0.0172 (recall)	0.0517 (recall)	0.0517 (recall)	0.0862 (recall)
	search indices on XML data that support keyword search increases. In this	the authors do not used the	0.036 (f-1)	0.0 (f-1)	0.009 (f-1)	0.0469 (f-1)	0.0732 (f-1)	0.0546 (f-1)
	paper, we present an approach of XML keyword search which is based on the	DeweyID to identify a node and to	- Rouge L:	- Rouge L:	- Rouge L:	- Rouge L:	- Rouge L:	- Rouge L:
	DAG of the XML data, where repeated substructures are considered only once,	calculate the ancestor-descendant	0.0788 (prec)	0.1282 (prec)	0.0793 (prec)	0.1831 (prec)	0.4 (prec)	0.1349 (prec)
	and therefore, have to be searched only once. As our performance evaluation	or even parent-child relationships,	0.2203 (recall)	0.1695 (recall)	0.2203 (recall)	0.2203 (recall)	0.1695 (recall)	0.2881 (recall)
	shows, this DAG-based extension of the set intersection search algorithm[1], [2],	but they propose to use a	0.1161 (f-1)	0.146 (f-1)	0.1166 (f-1)	0.2203 (recail) 0.2 (f-1)	0.2381 (f-1)	0.1838 (f-1)
	can lead to search times that are on large documents more than twice as fast as	combination of preorder position,	Summary:	Summary:	Summary:	Summary:	Summary:	Summary:
	_	· ' '	•	•	· ·	XRANK @cite is an extension of		•
	the search times of the XML-based approach. Additionally, we utilize a smaller	postorder position, and depth of	In contrast to XML query	in this paper, we consider the	"We consider the problem of		XRANK @cite is an extension of	XRANK @cite is a hyperlink
	index, i.e., we consume less main memory to compute the results.	the node.	languages as e.g. XPath which	problem of efficiently producing	efficiently producing ranked	the set intersection search	the set intersection search	based HTML search engine. It
	(2):		require knowledge on the query	ranked results for keyword	results for keyword search	algorithm @cite, which is based	algorithm @cite. XRANK can be	designed to perform keyword
	Recent works have shown the benefits of keyword proximity search in querying		language as well as on the	search queries over hyperlinked	queries over hyperlinked Xie	on the DAG of the XML data.	used to query a mix of HTML and	search over hyperlinked XML
	XML documents in addition to text documents. For example, given query		document structure, keyword	XML documents.	documents, as opposed to	XRANK is a hyperlink based	XML documents.	documents. However, it does
	keywords over Shakespeare's plays in XML, the user might be interested in		search is open to anybody. As	we present an approach of XML	(conceptually) flat HTML	HTML search engine that can be	Comment:	consider the nested structure
	knowing how the keywords cooccur. In this paper, we focus on XML trees and		the size of XML sources grows	keyword search which is based	documents, introduces many	used to query a mix of hyperlink	- Shows very weak signs of MDS,	the XML documents. XRANK o
	define XML keyword, proximity queries to return the (possibly heterogeneous)		rapidly, the need for efficient	on the set intersection search	new challenges," the authors	based XML documents. X-RANK	with an attempt to reference	be used to query a mix of HTN
	set of minimum connecting trees (MCTs) of the matches to the individual		search indices on XML data that	algorithm, where repeated	write. "First, Xie XRANK does not	is designed to handle the	multiple @cite.	and XML documents, but it do
	keywords in the query. We consider efficiently executing keyword proximity		support keyword search	substructures are considered	always return entire documents,	problem of efficiently producing	- Even worse than tuned LED	not require a hyperlink search
	queries on labeled trees (XML) in various settings: 1) when the XML database		increases. In this paper, we	only once, and therefore, have to	but can return deeply nesting	ranked results for keyword	- However, none of the	engine, and it does not need a
	has been preprocessed and 2) when no indices are available on the XML		present an approach of XML	be searched only once.	markup that contains the desired	search queries over hyperlinked	sentences generated are	hyperlink, and it is not require
	database. We perform a detailed experimental evaluation to study the benefits		keyword search which is based	we perform a detailed	keywords. Second, the nesting	XML documents, as opposed to	coherent, showing difficulties	to search for hyperlinks in a
	of our approach and show that our algorithms considerably outperform prior		on the DAG of the XML data,	experimental evaluation to study	structure of markup implies that	(conceptually) flat HTML	of the model when dealing	hyperlink document. Moreove
	algorithms and other applicable approaches.		where repeated substructures	the benefits of our approach and	the notion of ranking is no longer	documents.	with articles filled with	XRANK is designed to handle t
	(3):		are considered only once, and	show that our algorithms	at the granularity of a document,	Comment:	acronyms (XML, HTML) which it	nested structures of the XML
	We consider the problem of efficiently producing ranked results for keyword		therefore, have to be searched	considerably outperform prior	but at the granular of an markup.	- Shows very weak signs of MDS,	does not understand	document. In contrast, our
	search queries over hyperlinked XML documents. Evaluating keyword search		only once. As our performance	algorithms and other applicable	Finally, the notion of keyword	with an attempt to reference		approach is based on a DAG-
	queries over hierarchical XML documents, as opposed to (conceptually) flat		evaluation shows, this DAG-	approaches.	proximity is more complex in the	multiple @cite.		based extension of the set
	HTML documents, introduces many new challenges. First, XML keyword search		based extension of the set	Comment:	hierarchical markup data model.	- However, none of the		intersection search algorithm,
	queries do not always return entire documents, but can return deeply nested		intersection search algorithm[1],	- Very weak signs of MDS, with	In this paper, we present the	sentences generated are		which can lead to search times
	XML elements that contain the desired keywords. Second, the nested structure		[2], can lead to search times that	all 3 articles covered.	XRANK system that is designed	coherent, showing difficulties		that are more than twice as fa
	of XML implies that the notion of ranking is no longer at the granularity of a		are on large documents more	- However, they are all presented	to handle these novel features of	of the model when dealing		as the search time of the XML
	document, but at the granularity of an XML element. Finally, the notion of		than twice as fast as the search	as a single document.	Xie keyword search. Our	with articles filled with		based approach.
	keyword proximity is more complex in the hierarchical XML data model. In this		times of the XML-based	- The model also performs like	experimental results show that	acronyms (XML, HTML) which it		Comment:
	paper, we present the XRANK system that is designed to handle these novel		approach. Additionally, we utilize	an extractive model	XRANK offers both space and	does not understand		- Shows signs of MDS, with
	features of XML keyword search. Our experimental results show that XRANK		a smaller index, i.e., we consume	an extractive moder	performance benefits when	does not understand		yellow part contrasting
	offers both space and performance benefits when compared with existing		less main memory to compute		compared with existing			approach of the main art
	approaches. An interesting feature of XRANK is that it naturally generalizes a		the results. Recent works		approaches. An interesting			with that of the 3 rd (blue)
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	hyperlink based HTML search engine such as Google. XRANK can thus be used		have shown the benefits of		feature of XRANK is that it			- However, the red parts
	to query a mix of HTML and XML documents.		keyword proximity search in		naturally generalizes a hyperlink			show hallucination
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			addition to text documents.		as Google. XRANK can thus be			two-step model proba
			Comment:		used to query a mix of HTML and			helped simplify the meaning
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Modes where the production of									
One of the most multi-relative control and supplies of the control	No.	Abstracts	Label	Base LED	Large LED	Base Centrum	Tuned LED	Tuned Centrum	Two-step
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row event with the "pear provided and the Pear provided control of the Pea		natural networks exhibit a power-law or log-normal degree distribution. This	distribution are primarily either	0.0414 (prec)	,		0.1607 (prec)	0.129 (prec)	0.097 (prec)
specifications, they are all gold minded for an in feedback control of the contro		has inspired numerous generative models that match this property. However,	reductions to perfect matchings	0.038 (recall)	0.0707 (recall)	0.0815 (recall)	0.0489 (recall)	0.0435 (recall)	0.0707 (recall)
Lie of Extraction may be control to the control to		more recent work has shown that while these generative models do have the	or sequential sampling methods.	0.0397 (f-1)	0.0939 (f-1)	0.0761 (f-1)	0.075 (f-1)	0.065 (f-1)	0.0818 (f-1)
List and transport and work throws the entire control and entire device from the control and t		right degree distribution, they are not good models for real life networks due to	There are two popular perfect	- Rouge L:	- Rouge L:	- Rouge L:	- Rouge L:	- Rouge L:	- Rouge L:
Seque described from the means of the sequence		their differences on other important metrics like conductance. We believe this	matching methods. The first is the	0.1529 (prec)	0.2128 (prec)	0.1422 (prec)	0.3158 (prec)	0.2698 (prec)	0.2 (prec)
Secretarization of control and processed and		is, in part, because many of these real-world networks have very different joint	@cite @cite : @math mini-	0.1405 (recall)	0.1081 (recall)	0.1622 (recall)	0.0973 (recall)	0.0919 (recall)	0.1459 (recall)
Interview contained region which has seed present out that is a segment out of the post of the color of the color of the post of the color of the color of the post of the		degree distributions, i.e. the probability that a randomly selected edge will be	vertices are created for each	0.1465 (f-1)	0.1434 (f-1)	0.1515 (f-1)	0.1488 (f-1)	0.1371 (f-1)	0.1688 (f-1)
expectations, and it has been executed under the control department of		between nodes of degree k and l. Assortativity is a sufficient statistic of the joint	degree @math vertex, and all the	l ' '	, ,	, ,	, ,	\ ' '	
The search can be adopted and intervene plan among an electronic plan and the plan			,	l			<u> </u>	·	
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Amount in the parameters, we will approximate for example, for example, and the performance from these parameters, we will support the support of the proposal parameters, we will support the support of the proposal parameters, we will support the support of the proposal parameters, we will support the support of the proposal parameters, we will be between modes of degree to make the consistency of our model with the behalvoor of the marking parameters, we will be between modes of degree to make the proposal parameters, we will be a parameters, we will be parameters and the parameters of the parameters and the parameters and the parameters of the parameters and the parameters and the parameters are all the parameters and the		graphs with given degree sequences. This model involves only a small number	connected to each other @math ,	real-world networks have very	with a given degree sequence,	massive graphs. Furthermore,		some facts on the 3 rd (blue) and	
parameters, various properties of the group Land the derived. For example, for creating regions of the parameters, we will suppose the season that the probability we will allow the the probability we will be between notes of degree from manages group derived from data in steple occur with high probability we will allow the parameters will be the season that the probability we will be the season that the probability will be the probability will be the season that the probability of season that the probability will be th		of parameters, called logsize and log-log growth rate. These parameters capture	representing edge @math @cite .	different joint degree	and give analogous formulae for	from these parameters, various		4 th articles.	case, they cannot prove the
certain ranges of the parameters, we will be amounted accompanie which almost survey occur with high probability. We will illustrate the consistency of our model with the behavior of some massive graphs derived from data in telecommunications. We will also decreased on the first of the parameters of the parameters, we will be a strength of the parameters of the parameters, we will be a strength of the p		some universal characteristics of massive graphs. Furthermore, from these	Any perfect matching in this	distributions, i.e. the probability	hypergraphs.	properties of the graph can be			Markov chain in general, since
the size of the connected compared which almost surely occur with high probability will will almost set for consistency of our model with the behavior of some massive graphs derived from data in telecommunications. We will also state the reflected funding of paint component, and the evolution of random graphs in this model. 1. Then is n = 2, the number of limited designating rapids on the model. 1. Then is n = 3, the number of limited designating rapids on the model of the plant component with the consistency of our model with the consistency of the consis		parameters, various properties of the graph can be derived. For example, for	model corresponds exactly to a	that a randomly selected edge	Comment:	derived. For example, for certain			the score sequence of the two
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Some massive graphs derived from data in telecommunications. We will also greater the probabilistic of the probabilistic of the probabilistic of the probability of t		the sizes of the connected components which almost surely occur with high	the matching that correspond	k and l. Assortativity is a	the 1st (yellow), 2nd (green) and	compute the expected			proof techniques we use for the
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given score sequence. We analyze simple Markov chains for both problems. For the first problem, we cannot prove that our chain is rapidly mixing in general, but in the near-regular case, i.e., when all the degrees are almost equal, we give a proof of rapid mixing. Our methods also apply to the corresponding problem for general (nonbipartite) regular graphs, which was studied earlier by several researchers. One significant difference in our approach is that our chain has one state for every graph (or bipartite) graph (or bipartite) graph (or bipartite) graph) with the given degree sequence; in particular, there are no auxiliary states as in the chain used by Jerrum and Sinclair. For the problem of generating tournaments, we are able to prove that our Markov chain on tournaments is rapidly mixing, if the score sequence is near-regular, The proof techniques we use for the two problems are similar. Comment: - Very week signs of MDS, with the first (yellow), 2 nd (green) and 4 nd (purple) articles covered but not the 3 nd . - However, they are all presented as a single document. - The model also performs like				·					
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No.	Abstracts	Label	Base LED	Large LED	Base Centrum	Tuned LED	Tuned Centrum	Two-step
4858	(1):	Concerning set packings the	Rouge scores:	Rouge scores:	Rouge scores:	Rouge scores:	Rouge scores:	Rouge scores:
	It is shown that one can count @math -edge paths in an @math -vertex graph	situation is analogous, albeit the	- Rouge 2:	- Rouge 2:	- Rouge 2:	- Rouge 2:	- Rouge 2:	- Rouge 2:
	and @math -set @math -packings on an @math -element universe,	research has been somewhat less	0.1079 (prec)	0.0612 (prec)	0.0791 (prec)	0.125 (prec)	0.082 (prec)	0.0745 (prec)
	respectively, in time @math and @math , up to a factor polynomial in @math ,	extensive. Deciding whether a	0.1442 (recall)	0.0577 (recall)	0.1346 (recall)	0.0769 (recall)	0.0962 (recall)	0.0673 (recall)
	@math , and @math ; in polynomial space, the bounds hold if multiplied by	given family of @math subsets of	0.1235 (f-1)	0.0594 (f-1)	0.0996 (f-1)	0.0952 (f-1)	0.0885 (f-1)	0.0707 (f-1)
	@math or @math , respectively. These are implications of a more general	an @math -element universe	- Rouge L:	- Rouge L:	- Rouge L:	- Rouge L:	- Rouge L:	- Rouge L:
	result: given two set families on an @math -element universe, one can count	contains a @math -packing is	0.1714 (prec)	0.2222 (prec)	0.1348 (prec)	0.2923 (prec)	0.1951 (prec)	0.1895 (prec)
	the disjoint pairs of sets in the Cartesian product of the two families with	known to be W[1]-hard @cite,	0.2286 (recall)	0.2095 (recall)	0.2286 (recall)	0.181 (recall)	0.2286 (recall)	0.1714 (recall)
	@math basic operations, where @math is the number of members in the two	and thus it is unlikely that the	0.1959 (f-1)	0.2157 (f-1)	0.1696 (f-1)	0.2235 (f-1)	0.2105 (f-1)	0.18 (f-1)
	families and their subsets.	problem is fixed parameter	Summary:	Summary:	Summary:	Summary:	Summary:	Summary:
	(2):	tractable, that is, solvable in time	It is shown that one can count	given a set @math with @math	It is shown that one can count	For the Steiner tree problem	In @cite, Bjorklund and Husfeldt	In @cite, Dreyfus-Wagner
	We present a fast algorithm for the subset convolution problem:given functions	@math for some function @math	@math -edge paths in a @math	elements and a family @math of	@math -edge paths in an @math	@cite, one can count the disjoint	showed that one can partition a	algorithm @cite was presented,
	f and g defined on the lattice of subsets of ann-element set n, compute their	and constant @math . If @math is	-vertex graph and @math -set	subsets, we show how to	-vertex graph and @math -set	pairs of sets in the Cartesian	set @math into @math subsets	which is based on an @math
	subset convolution f*g, defined for $S\subseteq N$ by [(f * g)(S) = [T \subseteq S] f(T) g(S	fairly large, say exponential in	@math -packings on an @math	partition @math into @math	@math -packings on an @math-	product of the two families with	in @math time, where @math is	time bound of the classical
	T),,]where addition and multiplication is carried out in an arbitrary ring. Via	@math , the fastest known	-element universe, respectively,	such subsets in @math time.	element universe, respectively, in	· ·	the number of members in the	DREW algorithm. The algorithm
	Mobius transform and inversion, our algorithm evaluates the subset convolution	algorithms actually count the	in time @math and @math, up	we also consider variations of	time @math and @math, up to a	@math is the number of	two families and their subsets.	was extended to the Steiner Tree
	in O(n2 2n) additions and multiplications, substanti y improving upon the	packings by employing the	to a factor polynomial in @math,	this problem where the subsets	factor polyn Chocobo in @math,	members in the two families and	They also showed how to	problem by @cite and presented
	straightforward O(3n) algorithm. Specifically, if the input functions have	inclusionexclusion machinery	@math, and @math ; in	may overlap or are weighted,	@math, and @math; in polyn	their subsets @math. For the	partition the set into @math	an O(3n - @math) time bound
	aninteger range [-M,-M+1,,M], their subset convolution over the ordinary	@cite @cite and run in time	polynomial space, the bounds	and we solve the decision,	Chocobo space, the bounds hold	subset convolution problem, one	such subsets in time @math,	for the subgraphs with bounded
	sumproduct ring can be computed in O(2n log M) time; the notation O	@math . This bound holds also for	hold if multiplied by @math or	counting, summation, and	if multiplied by @math or	can count @math -edge paths in	where @math and @math are	integer weights. In the case
	suppresses polylogarithmic factors. Furthermore, using a standard embedding	the presented algorithm (cf.	@math, respectively. These are	optimization versions of these	@math, respectively. These are	an @math -vertex graph and	the subsets of @math. They also	where @math is not available,
	technique we can compute the subset convolution over the maxsum or min	Theorem).	implications of a more general	problems.	implications of a more general	@math -set @math -packings in	gave a family of polynomial	@cite showed how to partition
	sum semiring in O(2n M) time. To demonstrate the applicability of fast subset		result: given two set families on	our algorithms are based on the	result: given two set families on	time @math.	space approximation algorithms	@math into @math such subsets
	convolution, wepresent the first O(2k n2 + n m) algorithm for the Steiner tree		an @x-element universe, one	principle of inclusion-exclusion	an @ math -element universe,	Comment:	that find a number between	in polynomial time and @math
	problem in graphs with n vertices, k terminals, and m edges with bounded		can count the disjoint pairs of	and the zeta transform.	one can count the disjoint pairs	- No indication of MDS behavior,	@math and the @math in	in time @cite. In this case,
	integer weights, improving upon the O(3kn + 2k n2 + n m) time bound of the		sets in the Cartesian product of	in effect we get exact algorithms	of sets in the Cartesian product	basically just mixing in some		@math and @math are
	classical Dreyfus-Wagner algorithm. We also discuss extensions to recent O(2n)-		the two families with @math	in time @math for several well -	of the two families with @math	words of the 2 nd article (green)	algorithm for the subset	polynomial in time, and @cite
	time algorithms for covering and partitioning problems (Bjorklund and Husfeldt,		basic operations, where @math	studied partition problems	basic operations, where @math	with the 1 st (yellow)	convolution problem in graphs	gives an approximation
	FOCS 2006; Koivisto, FOCS 2006).		is the number of members in the	including domatic number,	is the number of members in the	- Shows once again how the		algorithm for chromatic number
	(3):		two families and their	chromatic number, maximum	two families and their subsets.	model fails to understand	terminals, and @math edges	and domatic number.
	Given a set @math with @math elements and a family @math of subsets, we		subsets. We present a fast	@math -cut, bin packing, list	We present a fast algorithm for the subset convolution	words used in unusual settings	with bounded integer weights,	Comment: - Best performing of all 3 tune
	show how to partition @math into @math such subsets in @math time. We		algorithm for the subset	coloring, and the chromatic polynomial.		(e.g. mathematics)	improving upon the classical	
	also consider variations of this problem where the subsets may overlap or are weighted, and we solve the decision, counting, summation, and optimization		convolution problem:given functions f and g defined on the	Comment:	problem:given functions f and g defined on the lattice of subsets		Dreyfus-Wagner algorithm. They also discussed extensions to	models, showing strong sign of MDS with the 2 nd (greer
	versions of these problems. Our algorithms are based on the principle of		lattice of subsets of ann-element	- Copied all of the 3 rd article	of ann-element set n, compute		recent @math -time algorithms	and 3rd (blue) articles reflected
	inclusion-exclusion and the zeta transform. In effect we get exact algorithms in		set n, compute their subset	except for last 2 sentences	their subset convolution f*g,		for covering and partitioning	- The red part appears to contai
	@math time for several well-studied partition problems including domatic		convolution f*g, defined for S⊆	- No indication of MDS	defined for $S\subseteq N$ by $[(f * g)(S) =$		problems.	some factual errors, with th
	number, chromatic number, maximum @math -cut, bin packing, list coloring,		Comment:	No indication of MBS	$[T \subseteq S]$ f(T) g(S T),]where		Comment:	original "O(3kn + 2k n2 + n m)
	and the chromatic polynomial. We also have applications to Bayesian learning		- Copied the first tokens only		addition and multiplication is		- Some weak signs of MDS, with	changed to "O(3n - @math)"
	with decision graphs and to model-based data clustering. If only polynomial		- No indication of MDS		carried out in an arbitrary ring.		the 2 nd (green) and 3 rd (blue)	- The first step LED model in th
	space is available, our algorithms run in time @math if membership in @math		- Random word change noted		Via Mobius transform and		articles referenced and mixed	two-step model probabl
	can be decided in polynomial time. We solve chromatic number in @math time		(red)		inversion, our algorithm		with the 1st (yellow)	helped simplify the meaning of
	and domatic number in @math time. Finally, we present a family of polynomial		(* -2-)		evaluates the subset convolved		- Shows once again how the	the individual passages?
	space approximation algorithms that find a number between @math and				in O(model fails to understand	
	@math in time @math .				Comment:		words used in unusual settings	
					- Copied the first tokens only		(e.g. mathematics)	
					- No indication of MDS		,	
					- Random word change noted			
					(red)			
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No.	Abstracts	Label	Base LED	Large LED	Base Centrum	Tuned LED	Tuned Centrum	Two-step
								•
5068	(1): Convolutional neural networks have gained a remarkable success in computer	Another bunch of related works include hyper-parameter	Rouge scores: - Rouge 2:	Rouge scores: - Rouge 2:	Rouge scores: - Rouge 2:	Rouge scores: - Rouge 2:	Rouge scores: - Rouge 2:	Rouge scores: - Rouge 2:
	vision. However, most usable network architectures are hand-crafted and	optimization @cite , meta-	0.0596 (prec)	0.0723 (prec)	0.0513 (prec)	0.0811 (prec)	0.0952 (prec)	0.0899 (prec)
	usually require expertise and elaborate design. In this paper, we provide a block-	learning @cite and learning to	0.1169 (recall)	0.0779 (recall)	0.1299 (recall)	0.039 (recall)	0.1299 (recall)	0.1039 (recall)
	wise network generation pipeline called BlockQNN which automatically builds	learn methods @cite @cite .	0.0789 (f-1)	0.075 (f-1)	0.0735 (f-1)	0.0526 (f-1)	0.1099 (f-1)	0.0964 (f-1)
	high-performance networks using the Q-Learning paradigm with epsilon-greedy	However, the goal of these works	- Rouge L:	- Rouge L:	- Rouge L:	- Rouge L:	- Rouge L:	- Rouge L:
	exploration strategy. The optimal network block is constructed by the learning	is to use meta-data to improve	0.1053 (prec)	0.1548 (prec)	0.0969 (prec)	0.1842 (prec)	0.1698 (prec)	0.2111 (prec)
	agent which is trained sequentially to choose component layers. We stack the	the performance of the existing	0.2051 (recall)	0.1667 (recall)	0.2436 (recall)	0.0897 (recall)	0.2308 (recall)	0.2436 (recall)
	block to construct the whole auto-generated network. To accelerate the	algorithms, such as finding the	0.1391 (f-1)	0.1605 (f-1)	0.1387 (f-1)	0.1207 (f-1)	0.1957 (f-1)	0.2262 (f-1)
	generation process, we also propose a distributed asynchronous framework and an early stop strategy. The block-wise generation brings unique advantages: (1)	optimal learning rate of optimization methods or the	Summary:	Summary: in this paper we show how the	Summary: Convolutional neural networks	Summary: In this paper, we propose a	Summary:	Summary:
	it performs competitive results in comparison to the hand-crafted state-of-the-	optimal number of hidden layers	Convolutional neural networks have gained a remarkable	design of an optimization	have gained a remarkable	block-wise network generation	Recently, meta-learning @cite @cite has gained a lot of	@cite @cite proposed a gradient descent method for meta-
	art networks on image classification, additionally, the best network generated	to construct the network. In this	success in computer vision.	algorithm can be cast as a	success in computer vision.	pipeline using the Q-learning	attention in the machine learning	learning. The gradient descent
	by BlockQNN achieves 3.54 top-1 error rate on CIFAR-10 which beats all existing	paper, we focus on learning the	However, most usable network	learning problem, allowing the	However, most usable network	paradigm with epsilon-greedy	literature. In this paper, we	method is similar to our method,
	auto-generate networks. (2) in the meanwhile, it offers tremendous reduction	entire topological architecture of	architectures are hand-crafted	algorithm to learn to exploit	architectures are hand-crafted	exploration strategy. We also	propose a block-wise network	but differs from our method in
	of the search space in designing networks which only spends 3 days with 32	network blocks to improve the	and usually require expertise and	structure in the problems of	and usually require expertise and	propose a distributed	generation pipeline called	two important aspects. First, the
	GPUs, and (3) moreover, it has strong generalizability that the network built on	performance.	elaborate design. In this paper,	interest in an automatic way.	elaborate design. In this paper,	asynchronous framework and an	BlockQNN which automatically	gradient descent method does
	CIFAR also performs well on a larger-scale ImageNet dataset.		we provide a block-wise network	we make meta-learning in large	we provide a block-wise network	early stop strategy to accelerate	builds high-performance	not rely on the gradient of the
	(2):		generation pipeline called	systems feasible by using	generation pipeline called	the generation process.	networks using the Q-Learning	gradient. Second, it does not
	This paper introduces the application of gradient descent methods to meta-		BlockQNN which automatically	recurrent neural networks withth	BlockQNN which automatically	Comment:	paradigm with epsilon-greedy	require the gradient of a gradient
	learning. The concept of "meta-learning", i.e. of a system that improves or		builds high-performance	eir attendant learning routines as	builds high-performance	- Only extracted 2 sentences	exploration strategy. The optimal	to be learned. In this paper, we
	discovers a learning algorithm, has been of interest in machine learning for decades because of its appealing applications. Previous meta-learning		networks using the Q-Learning	meta-learning systems. our learned algorithms	networks using the Q-learning	from the 1st article (yellow) - No indication of MDS	network block is constructed sequentially by the learning	show that the gradient of our
	approaches have been based on evolutionary methods and, therefore, have		paradigm with epsilon-greedy exploration strategy. The optimal	outperform generic, hand-	paradigm with epsilon-greedy exploration strategy. The optimal	- NO IIIdication of MD3	agent which is trained	method can be used as a meta- learning method. We also show
	been restricted to small models with few free parameters. We make meta-		network block is constructed by	designed competitors on the	network block is constructed by		sequentially to choose	that our approach can be applied
	learning in large systems feasible by using recurrent neural networks withth eir		the learning agent which is	tasks for which they are trained,	the learning agent which is		component layers. In addition, it	to large systems with few free
	attendant learning routines as meta-learning systems. Our system derived		trained sequentially to choose	and also generalize well to new	trained sequentially to choose		offers tremendous reduction of	parameters.
	complex well performing learning algorithms from scratch. In this paper we also		component layers. We stack the	tasks with similar structure.	component layers. We stack the		the search space in designing	Comment:
	show that our approachp erforms non-stationary time series prediction.		block to construct the whole	Comment:	block to construct the whole		networks which only spend 3	- Shows some sign of MDS, with
	(3):		auto-generated network. To	- Copied most of the 4th article	auto-generated network. To		days with 32 GPUs, and it has	the 2 nd article (green) being
	Different researchers hold different views of what the term meta-learning		accelerate the generation	(purple) and just inserted a	accelerate the generation		strong generalizability that the	mentioned.
	exactly means. The first part of this paper provides our own perspective view in		process, we also propose a	sentence from the 2 nd (green)	process, we also propose a		network built on CIFAR-10 also	- However, the other parts are
	which the goal is to build self-adaptive learners (i.e. learning algorithms that		distributed asynchronous	- No indication of MDS	distributed asynchronous		performs well on a larger-scale	mostly hallucinations
	improve their bias dynamically through experience by accumulating meta-		framework and an early stop strategy. The block-wise		framework and an early stop strategy. The block-wise		ImageNet dataset. Comment:	
	knowledge). The second part provides a survey of meta-learning as reported by the machine-learning literature. We find that, despite different views and		generation brings unique		generation brings unique		- No indication of MDS, except	
	research lines, a question remains constant: how can we exploit knowledge		advantages: (1) it performs		advantages: (1) it performs		for the red part where the	
	about learning (i.e. meta-knowledge) to improve the performance of learning		competitive results in		competitive results in		model noted "meta-learning"	
	algorithms? Clearly the answer to this question is key to the advancement of		comparison to the hand-crafted		comparison to the hand-crafted		is a recurring theme	
	the field and continues being the subject of intensive research.		state-of-the-art networks on		state-of-the-art networks on			
	(4):		image classification, additionally,		image classification, additionally,			
	The move from hand-designed features to learned features in machine learning		the best network generated by		the best network generated by			
	has been wildly successful. In spite of this, optimization algorithms are still		BlockQNN achieves 3.54 top-1		BlockQNN achieves 3.54 top-1			
	designed by hand. In this paper we show how the design of an optimization		error rate on CIFAR-10 which		error rate on CIFAR-10 which			
	algorithm can be cast as a learning problem, allowing the algorithm to learn to		beats all existing auto-generate		beats all existing auto-generate			
	exploit structure in the problems of interest in an automatic way. Our learned algorithms, implemented by LSTMs, outperform generic, hand-designed		networks. (2) Comment:		networks. (2) in the meanwhile, it offers tremendous reduction of			
	competitors on the tasks for which they are trained, and also generalize well to		- Copied the first tokens only		the search space in designing			
	new tasks with similar structure. We demonstrate this on a number of tasks,		- No indication of MDS		networks which only spends 3			
	including simple convex problems, training neural networks, and styling images		The indication of inde		days with 32 GPUs, and (3)			
	with neural art.				moreover, it has strong			
					generalizability that the network			
					built on CIFar also performs well			
					on a larger-scale ImageNet			
					dataset.			
					Comment:			
					Copied the first tokens onlyNo indication of MDS			
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No.	Abstracts	Label	Base LED	Large LED	Base Centrum	Tuned LED	Tuned Centrum	Two-step
76	(1):	Representing text Early works in	Rouge scores:	Rouge scores:	Rouge scores:	Rouge scores:	Rouge scores:	Rouge scores:
,,,	We address the problem of cross-modal fine-grained action retrieval between	image-to-text cross-modal	- Rouge 2:	- Rouge 2:	- Rouge 2:	- Rouge 2:	- Rouge 2:	- Rouge 2:
	text and video. Cross-modal retrieval is commonly achieved through learning a	retrieval @cite @cite used	0.0194 (prec)	0.0327 (prec)	0.0279 (prec)	0.0458 (prec)	0.0272 (prec)	0.0455 (prec)
	shared embedding space, that can indifferently embed modalities. In this	TF-IDF as a weighted bag-of-	0.0319 (recall)	0.0532 (recall)	0.0532 (recall)	0.0638 (recall)	0.0426 (recall)	0.0745 (recall)
	paper, we propose to enrich the embedding by disentangling parts-of-speech	words model for text	0.0241 (f-1)	0.0405 (f-1)	0.0366 (f-1)	0.0533 (f-1)	0.0332 (f-1)	0.0565 (f-1)
	(PoS) in the accompanying captions. We build a separate multi-modal embedding space for each PoS tag. The outputs of multiple PoS embeddings	representations (either from a word embedding model or one-	- Rouge L: 0.0769 (prec)	- Rouge L: 0.1169 (prec)	- Rouge L: 0.1056 (prec)	- Rouge L: 0.1439 (prec)	- Rouge L: 0.1554 (prec)	- Rouge L: 0.1097 (prec)
	are then used as input to an integrated multi-modal space, where we perform	hot vectors) in order to aggregate	0.1263 (recall)	0.1105 (prec)	0.2 (recall)	0.1435 (prec) 0.2 (recall)	0.2421 (recall)	0.1789 (recall)
	action retrieval. All embeddings are trained jointly through a combination of	variable length text captions into	0.0956 (f-1)	0.1446 (f-1)	0.1382 (f-1)	0.1674 (f-1)	0.1893 (f-1)	0.136 (f-1)
	PoS-aware and PoS-agnostic losses. Our proposal enables learning specialised	a single fixed sized	Summary:	Summary:	Summary:	Summary:	Summary:	Summary:
	embedding spaces that offer multiple views of the same embedded entities.	representation. With the advent	-modal features (different visual	we address the problem of	"We address the problem of	In the context of video-to-text	Cross-modal retrieval has been a	In @cite <mark>@cite</mark> , the authors
	We report the first retrieval results on fine-grained actions for the large-scale	of neural networks, works shifted	characteristics, audio inputs, and	cross-modal fine-grained action	cross-modal fine-grained action	retrieval, the task of image-to-	long-standing research problem	propose to use a PoS-agnostic
	EPIC dataset, in a generalised zero-shot setting. Results show the advantage of our approach for both video-to-text and text-to-video action retrieval. We also	to use RNNs, Gated Recurrent Units (GRU) or Long Short-Term	text) by a fusion strategy for efficient retrieval. Furthermore,	retrieval between text and video.	retrieval between text and video. Cross-modal retrieval is	video retrieval has been studied for decades @cite @cite, @cite	in computer vision and natural language processing (NLP) @cite	loss to enrich the embedding space by disentangling the parts-
	demonstrate the benefit of disentangling the PoS for the generic task of cross-	Memory (LSTM) units to extract	we explore several loss functions	we propose a novel framework	commonly achieved through	and @cite. In recent years, a	@cite. In recent years, several	of-speech (PoS) in the
	modal video retrieval on the MSR-VTT dataset.	textual features @cite or to use	in training the embedding and	for learning joint embeddings of	learning a shared embedding	`number of approaches have	approaches have been proposed	accompanying captions.
	(2):	these models within the	propose a modified pairwise	images and text using a two-	space, that can indifferently	been proposed to learn joint	to learn joint embeddings for	However, the authors do not
	We describe a novel cross-modal embedding space for actions, named	embedding network @cite @cite	ranking loss for the task.	branch neural network with	embed modalities. In this paper,	embeddings of images and text	image-text and text-to-video	consider the use of the PoS loss
	Action2Vec, which combines linguistic cues from class labels with spatio- temporal features derived from video clips. Our approach uses a hierarchical	@cite @cite @cite for both modalities.	Experiments on MSVD and MSR- VTT datasets demonstrate that	multiple layers of linear projections followed by	we propose to enrich the embedding by disentangling	using a two-branch neural network with multiple layers of	tasks. @cite proposed to learn a joint embedding of visual and	in the context of video-to-video action retrieval. In @cite, the
	recurrent network to capture the temporal structure of video features. We	modanties.	our method achieves significant	nonlinearities.	parts-of-speech (PoS) in the	linear projections followed by	textual cues that allows one to	authors propose a joint
	train our embedding using a joint loss that combines classification accuracy		performance gain compared to	the network is trained using a	accompanying captions. We	nonlinearities. @cite proposed a	query the database using a text	embedding space for noun and
	with similarity to Word2Vec semantics. We evaluate Action2Vec by performing		the state-of-the-art	largemargin objective that	build a separate multi-modal	multi-modal embedding for	modifier in addition to the query	action videos by augmenting the
	zero shot action recognition and obtain state of the art results on three		approaches. Learning a	combines cross-view ranking	embedding space for each PoS	image and text embeddings,	image, adapting the results to	training set with millions of
	standard datasets. In addition, we present two novel analogy tests which quantify the extent to which our joint embedding captures distributional		joint language-visual embedding has a number of very appealing	constraints with within-view neighborhood structure	tag. The outputs of multiple PoS embeddings are then used as	which can be trained jointly through a combination of neural	the modifier. In @cite, a multi-	weak annotated images with strong and noisy annotations
	semantics. This is the first joint embedding space to combine verbs and action		properties and can result in	preservation constraints inspired	input to an integrated multi-	language models and	modal joint embedding space is proposed to capture the	@cite. @cite proposes to use a
	videos, and the first to be thoroughly evaluated with respect to its		variety of practical application,	by metric learning literature.	Modal space, where we perform	multimodal neural language	temporal structure of video	two-branch neural network with
	distributional semantics.		including natural language	extensive experiments show	action retrieval. All	models. <mark>In @cite</mark> a joint	features. The joint embedding is	multiple layers of linear
	(3):		image video annotation and	that our approach gains	embeddeddings are trained	embedding for images and text	then used to disambiguate fine-	projections followed by
	Inspired by recent advances in multimodal learning and machine translation,		search. In this work, we study	significant improvements in	jointly through a combination of	embedding was proposed for	grained visual concepts in the	nonlinearities. The network is
	we introduce an encoder-decoder pipeline that learns (a): a multimodal joint embedding space with images and text and (b): a novel language model for		three different joint language- Visual neural network model	accuracy for image-to-text and textto-image retrieval.	PoS-aware and PoS-agnostic losses. Our proposal enables	image-sentence retrieval, where the goal is to retrieve images	sentence embedding process. In addition, @cite and @cite	trained using a largemargin objective that combines cross-
	decoding distributed representations from our space. Our pipeline effectively		architectures. We evaluate our	in addition, we show that a	learning specialised embedding	that contain the same object	propose to learn an embedding	view ranking constraints with
	unifies joint image-text embedding models with multimodal neural language		models on large scale LSMDC16	similarity based on human-	spaces that offer multiple views	instance as the query image. In	of images where the similarity in	within-view neighborhood
	models. We introduce the structure-content neural language model that		movie dataset for two tasks: 1)	annotated region-level captions	of the same embedded entities.	this work, we focus on the task	the visual space is correlated	structure preservation
	disentangles the structure of a sentence to its content, conditioned on		Standard Ranking for video	is highly correlated with the	We report the first retrieval	of video and text retrieval.	with the semantic similarity	constraints inspired by metric
	representations produced by the encoder. The encoder allows one to rank images and sentences while the decoder can generate novel descriptions from		annotation and retrieval 2) Our	human ranking and constitutes a	results on fine-grains actions for	Comment:	surrogate. In @math, @cite learn a joint representation	learning literature. However,
	scratch. Using LSTM to encode sentences, we match the state-of-the-art		proposed movie multiple-choice test. This test facilitate	good computable surrogate. we further extend our model to	the large-scale EPIC dataset, in a generalised zero-shot setting.	 Some signs of MDS, with the 1st (yellow) article used as 	invariant across different video	their method is based on a multi-layer neural network with
	performance on Flickr8K and Flickr30K without using object detections. We		automatic evaluation of visual-	learn a joint embedding of	Results show the advantage of	context, and the 4th (purple)	modalities.	a single layer of linear
	also set new best results when using the 19-layer Oxford convolutional		language models for natural	images and textual cues that	our approach for both video-to-	and 8 th (deep blue) articles	Comment:	projections and nonlinearities
	network. Furthermore we show that with linear encoders, the learned		language video annotation	allows one to query the	text and text-to-video action	covered.	- Much stronger signs of MDS,	I I
	embedding space captures multimodal regularities in terms of vector space		based on human activities. In	database using a text modifier in	retrieval. We also demonstrate	- However, the 2 nd yellow part	with the information from the	Entities image-sentence dataset
	arithmetic e.g. *image of a blue car* - "blue" + "red" is near images of red cars. Sample captions generated for 800 images are made available for		addition to original Audio Description (AD) captions	addition to the query image modifier.	the benefit of disentangling the PoS for the generic task of cross-	also shows that the work being done in the main article is	1st article (yellow) used as context, and then the 2nd	@cite. Comment:
	comparison.		Comment:	finally, we show how the	Modal video retrieval on the	mistaken as one of the	(green), 4th (purple), 5th	- Shows some sign of MDS, with
	(4):		- Copied from the middle of the	proposed	MSR-VTT dataset." "We	references.	(orange), 7th (deep yellow) and	the multiple articles being
	Querying with an example image is a simple and intuitive interface to retrieve		5 th article (orange)	Comment:	Comment:	- The last part on the task of the	8 th (deep blue) all referenced.	mentioned.
	information from a visual database. Most of the research in image retrieval has		- No sign of MDS	- Very weak signs of MDS, with	- Copied the first tokens only	main paper is possibly a		- However, the red parts are
	focused on the task of instance-level image retrieval, where the goal is to			the 1st (yellow), 4th (purple) and 8th (deep blue) articles	- No indication of MDS	hallucination.		mostly hallucinations
	retrieve images that contain the same object instance as the query image. In this work we move beyond instance-level retrieval and consider the task of			covered.				
	semantic image retrieval in complex scenes, where the goal is to retrieve			- However, they are all				
	images that share the same semantics as the query image. We show that,			presented as a single				
	despite its subjective nature, the task of semantically ranking visual scenes is			document.				
	consistently implemented across a pool of human annotators. We also show			- The model also performs like				
	that a similarity based on human-annotated region-level captions is highly correlated with the human ranking and constitutes a good computable			an extractive model				
	surrogate. Following this observation, we learn a visual embedding of the							
	images where the similarity in the visual space is correlated with their							
	semantic similarity surrogate. We further extend our model to learn a joint							
	embedding of visual and textual cues that allows one to query the database							
	using a text modifier in addition to the query image, adapting the results to the modifier. Finally, our model can ground the ranking decisions by showing							
	regions that contributed the most to the similarity between pairs of images,							
	providing a visual explanation of the similarity.							
	(5):							
	Constructing a joint representation invariant across different modalities (e.g.,							
	video, language) is of significant importance in many multimedia applications.							
	While there are a number of recent successes in developing effective image- text retrieval methods by learning joint representations, the video-text							
	retrieval task, however, has not been explored to its fullest extent. In this							
	paper, we study how to effectively utilize available multimodal cues from							
	videos for the cross-modal video-text retrieval task. Based on our analysis, we							

No.	Abstracts	Label	Base LED	Large LED	Base Centrum	Tuned LED	Tuned Centrum	Two-step
485	(1):	In learning classifier with web	Rouge scores:	Rouge scores:	Rouge scores:	Rouge scores:	Rouge scores:	Rouge scores:
403	Learning from web data has attracted lots of research interest in recent years.	data, previous works focus on	- Rouge 2:	- Rouge 2:	- Rouge 2:	- Rouge 2:	- Rouge 2:	- Rouge 2:
	However, crawled web images usually have two types of noises, label noise	handling the label noise in three	0.0175 (prec)	0.0258 (prec)	0.0048 (prec)	0.0485 (prec)	0.0266 (prec)	0.0287 (prec)
	and background noise, which induce extra difficulties in utilizing them	directions, removing label noise	0.0732 (recall)	0.0976 (recall)	0.0244 (recall)	0.122 (recall)	0.122 (recall)	0.1463 (recall)
	effectively. Most existing methods either rely on human supervision or ignore	@cite @cite @cite @cite	0.0283 (f-1)	0.0408 (f-1)	0.0081 (f-1)	0.0694 (f-1)	0.0437 (f-1)	0.048 (f-1)
	the background noise. In this paper, we propose a novel method, which is	@cite @cite , building noise-	- Rouge L:	- Rouge L:	- Rouge L:	- Rouge L:	- Rouge L:	- Rouge L:
	capable of handling these two types of noises together, without the	robust model @cite @cite @cite	0.064 (prec)	0.0705 (prec)	0.0433 (prec)	0.1058 (prec)	0.0688 (prec)	0.0667 (prec)
	supervision of clean images in the training stage. Particularly, we formulate our	@cite @cite @cite , and	0.2619 (recall)	0.2619 (recall)	0.2143 (recall)	0.2619 (recall)	0.3095 (recall)	0.3333 (recall)
	method under the framework of multi-instance learning by grouping ROIs (i.e., images and their region proposals) from the same category into bags. ROIs in	curriculum learning @cite @cite .	0.1028 (f-1) Summary:	0.1111 (f-1) Summary:	0.072 (f-1) Summary:	0.1507 (f-1) Summary:	0.1126 (f-1) Summary:	0.1111 (f-1) Summary:
	each bag are assigned with different weights based on the representative		Learning from web data has	learning from web data is	We present a simple yet efficient	Label noise is an important issue	The label noise problem has	Recently, there has been a lot of
	discriminative scores of their nearest clusters, in which the clusters and their		attracted lots of research	increasingly popular due to	approach capable of training	in image classification, with	been widely studied in the	research on label noise cleaning.
	scores are obtained via our designed memory module. Our memory module		interest in recent years.	abundant free web resources.	deep neural networks on large-	many potential negative	literature @cite @cite. In @cite,	In @cite @cite, the label noise is
	could be naturally integrated with the classification module, leading to an end-		However, it is still very difficult	however, the performance gap	scale weakly-supervised web	consequences @cite @cite. For	the label noise is treated as a	treated as a set of instances that
	to-end trainable system. Extensive experiments on four benchmark datasets		to learn from web data without	between webly supervised	images, which are crawled raw	example, the label noise can be	label noise, and the label noise	are mislabeled, and the label
	demonstrate the effectiveness of our method.		the supervision of a human. In	learning and traditional	from the Internet by using text	class-conditional @cite, which is		cleansing algorithm is proposed
	(2):		this paper, we study the problem	supervised learning is still very	queries, without any human	not scalable for large-scale	and @cite address the label	to deal with the label noise. In
	We study the problem of automatically removing outliers from noisy data,		of learning from web data. The	large, due to the label noise of	supervision. We develop a	weakly-supervised learning. To	noise by using the abundant	addition, @cite proposed an
	with application for removing outlier images from an image collection. We		problem is that web images	web data as well as the domain shift between web data and test	principled learning strategy by leveraging curriculum learning,	address this problem, several methods have been proposed.	surrogate loss functions designed for the traditional	active learning approach for removing outliers from an image
	address this problem by utilizing the reconstruction errors of an autoencoder. We observe that when data are reconstructed from low-dimensional		usually have two types of noises, label noise and background	data. to fill this gap, most	with the goal of handling a	@cite proposed a method for	classification problem when	collection @cite, which does not
	representations, the inliers and the outliers can be well separated according to		noise, which induce extra	existing methods propose to	massive amount of noisy labels	learning from unlabeled web	there is label noise. Recently,	require a large amount of
	their reconstruction errors. Based on this basic observation, we gradually		difficulties in utilizing them	purify or augment web data	and data imbalance effectively.	data, which is based on the	@cite proposed a method to	training data to train the model,
	inject discriminative information in the learning process of an autoencoder to		effectively. Most existing	using instance-level supervision,	We design a new learning	assumption that the unlabeled	remove outlier images from an	and they do not need any
	make the inliers and the outliers more separable. Experiments on a variety of		methods either rely on human	which generally requires heavy	curriculum by measuring the	data can be used to improve the	image collection by utilizing the	annotated labels for training.
	image datasets validate our approach.		supervision or ignore the	annotation.	complexity of data using its	classification performance.	reconstruction errors of an	Moreover, the label noise
	(3):		background noise. In this article,	instead, we propose to address	distribution density in a feature	However, these methods do not	autoencoder. In this paper, we	cleansing algorithms are defined
	We present a theoretically grounded approach to train deep neural networks,		we propose a novel method,	the label noise and domain shift	space, and rank the complexity	consider the label noise of web	propose a novel method, which	as follows: first, the labels of the
	including recurrent networks, subject to class-dependent label noise. We propose two procedures for loss correction that are agnostic to both		which is capable of handling these two types of noise	by using more accessible category-level supervision.	in an unsupervised manner. This allows for an efficient	data. In contrast, our method is able to deal with the label noise	is capable of handling both label noise and background noise	instances are labeled, and second, the labels
	application domain and network architecture. They simply amount to at most		together, without the	in particular, we build our deep	implementation of curriculum	without the supervision of the	together, without the	are labeled, respectively. The
	a matrix inversion and multiplication, provided that we know the probability of		supervision or supervision of	probabilistic framework upon	learning on large- scale web	classification module.	supervision of clean images in	labels are labeled by the label
	each class being corrupted into another. We further show how one can		clean images in the training	variational autoencoder (VAE),	images, resulting in a high-	Comment:	the training stage. In addition,	noise correction algorithm and
	estimate these probabilities, adapting a recent technique for noise estimation		stage. Particularly, we formulate	in which classification network	performance CNN the model,	- Some sign of MDS, using the	we formulate our method under	the labels of mislabeled
	to the multi-class setting, and thus providing an end-to-end framework.		our method under the	and VAE can jointly leverage	where the negative impact of	context information from the	the framework of multi-instance	instances are labeled by label
	Extensive experiments on MNIST, IMDB, CIFAR-10, CIFAR-100 and a large scale		framework of multi-instance	category-level hybrid	noisy labels is reduced	1 st article (yellow) as	learning by grouping ROIs (i.e.,	noise cleansing. @cite used
	dataset of clothing images employing a diversity of architectures —		learning by grouping ROIs (i.e.,	information. our memory	substantially. Importantly, we	background, and also	images and their region	curriculum learning to train a
	stacking dense, convolutional, pooling, dropout, batch normalization, word		images and their region	module could be naturally	show by experiments that those	mentioned correctly some	proposals) from the same	deep neural network on large-
	embedding, LSTM and residual layers — demonstrate the noise robustness of our proposals. Incidentally, we also prove that, when ReLU is the		proposals) from the same category into bags. ROIs in each	integrated with the classification module, leading to an end-to-	images with highly noisy labels can surprisingly improve the	elements of the current study - Elements of 4th article (purple)	category into bags. ROIs in each bag are assigned with different	scale web images, which are crawled raw from the Internet
	only non-linearity, the loss curvature is immune to class-dependent label		bag are assigned with different	end trainable system.	generalization capability of	is clear while the 1st red part is	0	by using text queries, without
	noise.		weights based on the	we design a new learning	model, by serving as a manner	true for many samples.	representative discriminative	any human annotation.
	(4):		representative discriminative	curriculum by measuring the	of regularization. Our	,	scores of their nearest clusters,	However, curriculum learning
	In this paper, we study the problem of learning image classification models		scores of their nearest clusters,	complexity of data using its	approaches obtain state-of-the-		in which the clusters and their	can significantly improve the
	with label noise. Existing approaches depending on human supervision are		in which the clusters and their	distribution density, in an	art performance on four		scores are obtained via our	generalization capability of the
	generally not scalable as manually identifying correct or incorrect labels is		scores are obtained via our	unsupervised manner in an	benchmarks: WebVision,		designed memory module. Our	model, by reducing the number
	time-consuming, whereas approaches not relying on human supervision are		designed memory module.	Comment:	ImageNet, Clothing-1M and		memory module could be	of noisy labels, and by using
	scalable but less effective. To reduce the amount of human supervision for label noise cleaning, we introduce CleanNet, a joint neural embedding		Comment: - Copied the first tokens only	 Copied the 6th article, except replacing the last 2 sentences 	Food-101. With an ensemble of multiple models, we achieved a		naturally integrated with the classification module, leading to	curriculum learning to reduce the amount of data imbalance in
	network, which only requires a fraction of the classes being manually verified		- No indication of MDS	with another sentence from	top-5 error rate of 5.2 on the		an end-to-end trainable system.	the training process. Moreover,
	to provide the knowledge of label noise that can be transferred to other		The management of miles	the 5th article (orange)	WebVision challenge [18] for		Comment:	curriculum learning is effective
	classes. We further integrate CleanNet and conventional convolutional neural			- No indication of MDS	1000-category classification. This		- Clear signs of MDS, with the 1st	_
	network classifier into one framework for image classification learning. We				result was the top performance		article (yellow) used for both	data imbalance effectively.
	demonstrate the effectiveness of the proposed algorithm on both of the label				by a wide margin,		context (at the beginning) and	Comment:
	noise detection task and the image classification on noisy data task on several				outperforming second place by a		contrast with other studies in	·
	large-scale datasets. Experimental results show that CleanNet can reduce label				nearly 50 relative		the latter half	article (yellow) used for
	noise detection error rate on held-out classes where no human supervision				Comment:		- 3 other articles are cited,	
	available by 41.5 compared to current weakly supervised methods. It also achieves 47 of the performance gain of verifying all images with only 3.2				 Copied the 5th article only No indication of MDS 		though the red parts shows a poorly written sentence.	7 th (pink) and 8 th (deep blue) articles referenced.
	images verified on an image classification task. Source code and dataset will be				- No indication of MD3		poorly written sentence.	- Contains much hallucinations
	available at kuanghuei.github.io CleanNetProject.							though as noted in the red
	(5):							parts.
	We present a simple yet efficient approach capable of training deep neural							
	networks on large-scale weakly-supervised web images, which are crawled raw							
	from the Internet by using text queries, without any human annotation. We							
	develop a principled learning strategy by leveraging curriculum learning, with							
	the goal of handling a massive amount of noisy labels and data imbalance							
	effectively. We design a new learning curriculum by measuring the complexity of data using its distribution density in a feature space, and rank the							
	complexity in an unsupervised manner. This allows for an efficient							
	implementation of curriculum learning on large-scale web images, resulting in							
	a high-performance CNN the model, where the negative impact of noisy labels							
	is reduced substantially. Importantly, we show by experiments that those							
	images with highly noisy labels can surprisingly improve the generalization							
	capability of model, by serving as a manner of regularization. Our approaches							

Low latency services such a credit-card fraud detection and website targeted advertsement rely on light path platforms (e.g., ulicene, Capably high passes platforms, however, unter from unpredictable and unacceptably high passes times due to inadequate memory management decisions (e.g., allocating objects with very different lifetimes next ocan chort, resulting in memory fragmentation). This leads to long and frequent application passes times, breaking service such parking service such paths to be and on the production of application that had of in memory management techniques are fished and results show that current memory management techniques are fished and results show that current memory management techniques are fished and results show that current memory management techniques are fished and results show that current memory management techniques are fished and results show that current memory management techniques are fished and results show that current memory management techniques are fished and results show that current memory management techniques are fished to long-lived objects (which is the case for a wide spectrum of tig Data applications). Previous outsity to reduce used application passes by a substituting the pressure on memory management. However, all three solutions require a combination of programmer eifort and knowledge, can be applicated on the part of the productivity and or application participation passes are fished and results show that current memory management effections and which are fished and results show that current memory management effects on the handled differently from the productivity and or application passes are fished and results show that such objects ment of the passes and the passes are fished and results show that such objects ment of the passes and the passes are fished to long-lifetimes, given that such objects ment of the passes and the passes are fished to long-lifetimes, given that such objects ment of the passes and the passes are fished to long-lifetimes, give	No.	Abstracts	Label	Base LED	Large LED	Base Centrum	Tuned LED	Tuned Centrum	Two-step
advortement or or an Exportance of the production and an activation of the production of the productio	1368	(1):	Profiling plays a key role in	Rouge scores:	Rouge scores:	Rouge scores:	Rouge scores:	Rouge scores:	Rouge scores:
which now too for meroyn reverged preference, set all on the PMI INVESTIGATION of the Committee of the Commi			,		•	•			- Rouge 2:
Bookers, the content and external residence and external residence in the content of the content				, ,	,		, ,		0.0164 (prec)
ment on the hardward are environy recognized concerns on a processing flower of livery inflered internal control and an extra processing to the control of the processing of t			_	· ·	, ,	, ,	, ,	, ,	0.0148 (recall) 0.0156 (f-1)
Access with very different filtering and the transition of the country of the cou				1					- Rouge L:
personal power processors (Language and Parameters (Language and Parameters (Language and Parameters)) and processors of the processor of the			-	_	_	_		_	0.1301 (prec)
decorded and recovery above data contract technologies of milled to application that their movement of milled to application the programment of th			drive object pretenuring. is, to	0.1176 (recall)	, ,	0.1618 (recall)		0.0882 (recall)	0.1176 (recall)
I stands for applications for the day in memory anisotron answer or many times of the position of the position of the position of the spill and the spill an			J ,	, ,		· '		0.1224 (f-1)	0.1236 (f-1)
to the level distinct shall be desire for an elevative state of block and process of the control		· ·		•	I		<u> </u>	•	Summary:
applications). Precious offere on the application planes by an observation of the second control of the posture of the control of the posture of the control of the posture		, ,	' ' ' ' ' ' ' ' ' ' ' ' ' ' ' ' ' ' '	•	' ' '			@cite @cite propose a tunable profiling technique, called	@cite @cite is a dynamic program analysis tool for
allocating objects of otherwise or improvement, expective in the southway of the part and the property interpretation of the property interpretation of the property of the part and the part and the property of the part and the part and the property of the part and the property			" "		•			Resurrector, that explores the	producing traces of garbage
require a combination of programmer e-float and two-relates, source code access, or or interporting which are applied may not present and two-relates, source code and secretary and or application partnermance, it was part presents 2019; a source of the two-partnermance is the programmer e-float and two-relates are applied to partnermance, the same partnermance is the programmer e-float and two-relates are applied to partnermance in the programmer e-float and two-relates are applied to partnermance in the partnermance is the programmer e-float and two-relates are applied to partnermance in the programmer e-float and two-relates are applied to partnermance in the programmer e-float and two-relates are applied to partnermance in the programmer e-float and two-relates are applied to the programmer				_		' = -		middle ground between high	collection events, including
section, or officine profiling, with Cear measured impact on programment an octoristic water of providing or profiler special countries and experiment found in the profiler spe		alleviating the pressure on memory management. However, all these solutions	systems, namely, off-line and	Lucene, Graphchi, Cassandra)	virtual machine technology and	that require garbage collection.	analysis of allocation contexts,	precision and high efficiency to	object allocations, object deaths,
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(5): Programmers are writing a rapidly growing number of programs in object-									
oriented languages, such as Java and C#, that require garbage collection.									
Garbage collection traces and simulation speed up research by enabling		Garbage collection traces and simulation speed up research by enabling							
deeper understandings of object lifetime behavior and quick exploration and		deeper understandings of object lifetime behavior and quick exploration and							

No.	Abstracts	Label	Base LED	Large LED	Base Centrum	Tuned LED	Tuned Centrum	Two-step
1864	(1):	Several authors have tried to	Rouge scores:	Rouge scores:	Rouge scores:	Rouge scores:	Rouge scores:	Rouge scores:
1001	While word embeddings have been shown to implicitly encode various forms	improve word embeddings by	- Rouge 2:	- Rouge 2:	- Rouge 2:	- Rouge 2:	- Rouge 2:	- Rouge 2:
	of attributional knowledge, the extent to which they capture relational	incorporating external knowledge	0.0533 (prec)	0.0284 (prec)	0.0333 (prec)	0.0633 (prec)	0.0795 (prec)	0.033 (prec)
	information is far more limited. In previous work, this limitation has been	bases. For example, some	0.0616 (recall)	0.0274 (recall)	0.0479 (recall)	0.0342 (recall)	0.0479 (recall)	0.0205 (recall)
	addressed by incorporating relational knowledge from external knowledge	authors have proposed models	0.0571 (f-1)	0.0279 (f-1)	0.0393 (f-1)	0.0444 (f-1)	0.0598 (f-1)	0.0253 (f-1)
	bases when learning the word embedding. Such strategies may not be optimal, however, as they are limited by the coverage of available resources	which combine the loss function of a word embedding model, to	- Rouge L: 0.1588 (prec)	- Rouge L: 0.1549 (prec)	- Rouge L: 0.1327 (prec)	- Rouge L: 0.2375 (prec)	- Rouge L: 0.2472 (prec)	- Rouge L: 0.1848 (prec)
	and conflate similarity with other forms of relatedness. As an alternative, in	ensure that word vectors are	0.1837 (recall)	0.1497 (recall)	0.1905 (recall)	0.1293 (recall)	0.1497 (recall)	0.1156 (recall)
	this paper we propose to encode relational knowledge in a separate word	predictive of their context words,	0.1703 (f-1)	0.1522 (f-1)	0.1564 (f-1)	0.1674 (f-1)	0.1864 (f-1)	0.1423 (f-1)
	embedding, which is aimed to be complementary to a given standard word	with the loss function of a	Summary:	Summary:	Summary:	Summary:	Summary:	Summary:
	embedding. This relational word embedding is still learned from co-occurrence statistics, and can thus be used even when no external knowledge base is	knowledge graph embedding	word representations.	vector space word	Machine learning about	There is a large body of work on	Word embeddings have been widely used in NLP @cite @cite	In @cite @cite, the authors
	available. Our analysis shows that relational word vectors do indeed capture	model, to encourage the word vectors to additionally be	Machine learning about language can be improved by	representations are learned from distributional information	language can be improved by supplying it with specific	incorporating relational knowledge into NLP tasks @cite	widely used in NLP @cite @cite, where they have been shown to	proposed an asymmetric cosine distance measure to emphasise
	information that is complementary to what is encoded in standard word	predictive of a given set of	supplying it with specific	of words in large corpora.	knowledge and sources of	@cite. In particular, @cite	be useful for various NLP tasks,	the hypernymy relation of lexical
	embeddings.	relational facts @cite @cite	knowledge and sources of	although such statistics are	external information. We	proposed a method to	such as word similarity, sentence	entailment. However, this
	(2):	@cite . Other authors have used	external information. We	semantically informative, they	present here a new version of	incorporate semantic knowledge	completion, name entity	distance measure does not
	Despite the emergence and growth of numerous large knowledge graphs, many basic and important facts about our everyday world are not readily	knowledge bases in a more restricted way, by taking the fact	present here a new version of the linked open data resource	disregard the valuable information that is contained in	the linked open data resource ConceptNet that is particularly	into the learning process of word embeddings to improve	recognition, and so on @cite. However, these embeddings do	consider hypernymy directionality, hypernymy
	available on the Web. To address this, we present WebBrain, a new approach	that two words are linked to each	ConceptNet that is particularly	semantic lexicons such as	well suited to be used with	the quality of them. In @cite,	not explicitly capture relational	detection, or hypernymy
	for harvesting commonsense knowledge that relies on joint learning from	other in a given knowledge graph	well suited to be used with	WordNet, FrameNet, and the	modern NLP techniques such as	the authors proposed a method	information, which is the focus	classification. Furthermore, in
	Web-scale data to fill gaps in the knowledge acquisition. We train a neural	as evidence that their word	modern NLP techniques such as	Paraphrase Database.	word embeddings. ConceptNet	for incorporating the	<mark>of this paper.</mark> In contrast, our	@cite the authors proposed a
	network model to learn relations based on large numbers of textual patterns	vectors should be similar @cite	word embeddings. ConceptNet	this paper proposes a novel	is a knowledge graph that	information about relationship	work aims to learn relational	method for using the cosine
	found on the Web. At the same time, the model learns vector representations of general word semantics. This joint approach allows us to generalize beyond	@cite . Finally, there has also been work that uses lexicons to	is a knowledge graph that connects words and phrases of	framework for refining vector space representations using	connects words and phrases of natural language with labeled	between entities that they extract from knowledge bases.	word embeddings that are complementary to a given word	distance to emphasise hypernymy, and they do not
	the explicitly extracted information. Experiments show that we can obtain	learn word embeddings which	natural language with labeled	relational information from	edges. Its knowledge is collected	In this paper, we propose to	embedding, and can thus be	consider the asymmetric
	representations of words that reflect their semantics, yet also allow us to	are specialized towards certain	edges. Its knowledge is collected	semantic lexicons by	from many sources that include	incorporate the information	used with modern NLP	distance measure. In @cite, the
	capture conceptual relationships and commonsense knowledge.	types of lexical knowledge, such	from many sources that include	encouraging linked words to	expert-created resources,	about relation between entities	techniques such as WordNet	authors presented a constrained
	(3):	as hypernymy @cite @cite ,	expert-created resources,	have similar vector	crowd-sourcing, and games with	that is learned from	@cite and Word2Vec @cite to	optimization problem, where the
	We present LEAR (Lexical Entailment Attract-Repel), a novel post-processing method that transforms any input word vector space to emphasise the	antonymy @cite @cite or a combination of various linguistic	crowd-sourcing, and games with a purpose. It is designed to	representations, and it makes no assumptions about how the	a purpose. It is designed to represent the general	distributional semantics alone. Comment:	learn relational embeddings. Comment:	data-derived objective function is optimized subject to all ordinal
	asymmetric relation of lexical entailment (LE), also known as the IS-A or	constraints @cite .	represent the general	input vectors were constructed.	knowledge involved in	- Clear signs of MDS, with the 1st	- Clear signs of MDS, with the 1st	knowledge inequality constraints
	hyponymy-hypernymy relation. By injecting external linguistic constraints (e.g.,		knowledge involved in	we present a novel post-	understanding language,	article (yellow) used for	article (yellow) used for	extracted from available
	WordNet links) into the initial vector space, the LE specialisation procedure		understanding language,	processing method called LEAR	improving natural language	context (at the beginning),	context (at the beginning) and	knowledge resources such as
	brings true hyponymy-hypernymy pairs closer together in the transformed		improving natural language	(Lexical Entailment Attract-Repel	applications by allowing the	with the 4 th (purple) and 7 th	its difference also clearly	Thesaurus and WordNet.
	Euclidean space. The proposed asymmetric distance measure adjusts the norms of word vectors to reflect the actual WordNet-style hierarchy of		applications. This relational word embedding is still learned) that transforms any input word vector space to emphasise the	application to better understand the meanings behind the words	(pink) articles are reference.The last sentence (red)	stated in the latter part. - A part of the 4 th (purple) article	Comment: - Some signs of MDS, with the
	concepts. Simultaneously, a joint objective enforces semantic similarity using		from co-occurrence statistics,	asymmetric relation of lexical	people use. When ConceptNet is	attempts to contrast what is	is also leveraged to provide	3 rd (blue) and 4 th (purple)
	the symmetric cosine distance, yielding a vector space specialised for both		and can thus be used even when	entailment (LE), also known as	combined with word	being down in the 1st article	further reference.	articles are included in the
	lexical relations at once. LEAR specialisation achieves state-of-the-art		no external knowledge base is	the hyponymy-hypernymy	embeddINGS acquired from	but used a phrase from the 6 th	- While totally not accurate, it	summary.
	performance in the tasks of hypernymy directionality, hypernymy detection, and graded lexical entailment, demonstrating the effectiveness and robustness		available. Our analysis shows that relational word vectors do	relation. by injecting external	distributional semantics (such as word2vec), it provides	article (deep blue) instead	appears the model learned that WordNet and Word2Vec	 However, the red part is once again a hallucination
	of the proposed asymmetric specialisation model.		indeed capture information that	linguistic constraints (e.g., WordNet links) into the initial	applications with understanding		are entities related to word	again a nanucination
	(4):		is complementary to what is	vector space, the LE	that they would not acquire		embeddings and NLP	
	In this paper, we propose a general framework to incorporate semantic		encoded in standard	specialisation procedure brings	from distributional mechanics		techniques, thus copying them	
	knowledge into the popular data-driven learning process of word embeddings		words. Despite the	true hyponymy - hypernymy	alone, nor from narrower		from the 6 th article (deep blue)	
	to improve the quality of them. Under this framework, we represent semantic knowledge as many ordinal ranking inequalities and formulate the learning of		emergence and growth of numerous large knowledge	pairs closer together in the transformed Eucl	resources such as WordNet or DBPedia. We demonstrate this			
	semantic word embeddings (SWE) as a constrained optimization problem,		graphs, many basic and	Comment:	with state-of-the-art results on			
	where the data-derived objective function is optimized subject to all ordinal		important facts about our	-Copied all but the last 2	intrinsic evaluations of word			
	knowledge inequality constraints extracted from available knowledge		everyday world are not readily	sentences of the 9th article,	relatedness that translate into			
	resources such as Thesaurus and WordNet. We have demonstrated that this		available on the	then switched back to the 2 nd	l			
	constrained optimization problem can be efficiently solved by the stochastic gradient descent (SGD) algorithm, even for a large number of inequality		Comment: - All copied, but interestingly	(blue) - No indication of MDS	word vectors, including solving SAT-style analogies. In this paper,			
	constraints. Experimental results on four standard NLP tasks, including word		started form the last tokens of	The initiation of initia	we present a novel framework			
	similarity measure, sentence completion, name entity recognition, and the		the 5th article, copied the 6th,		called RC-NET to leverage both			
	TOEFL synonym selection, have all demonstrated that the quality of learned		then switched back to the 2 nd		the relational and categorical			
	word vectors can be significantly improved after semantic knowledge is incorporated as inequality constraints during the learning process of word		- No indication of MDS		knowledge to produce word representations of higher			
	embeddings.				quality. Specifically, we build the			
	(5):				relational knowledge and			
	Representing words into vectors in continuous space can form up a potentially				Comment:			
	powerful basis to generate high-quality textual features for many text mining				- Copied the 6 th article in full,			
	and natural language processing tasks. Some recent efforts, such as the skip- gram model, have attempted to learn word representations that can capture				then switched to the middle oif the 5 th (orange)			
	both syntactic and semantic information among text corpus. However, they				- No indication of MDS			
	still lack the capability of encoding the properties of words and the complex							
	relationships among words very well, since text itself often contains							
	incomplete and ambiguous information. Fortunately, knowledge graphs							
	provide a golden mine for enhancing the quality of learned word representations. In particular, a knowledge graph, usually composed by							
	entities (words, phrases, etc.), relations between entities, and some							
	corresponding meta information, can supply invaluable relational knowledge							
	that encodes the relationship between entities as well as categorical							
	knowledge that encodes the attributes or properties of entities. Hence, in this paper, we introduce a novel framework called RC-NET to leverage both the							
L	paper, we introduce a novel framework called he-fact to leverage both the	<u> </u>		1	1			

No.	Abstracts	Label	Base LED	Large LED	Base Centrum	Tuned LED	Tuned Centrum	Two-step
1872	(1):	The bad Nash equilibrium in	Rouge scores:	Rouge scores:	Rouge scores:	Rouge scores:	Rouge scores:	Rouge scores:
	We consider the well-studied game-theoretic version of machine scheduling in	Example appears in several works	- Rouge 2:	- Rouge 2:	- Rouge 2:	- Rouge 2:	- Rouge 2:	- Rouge 2:
	which jobs correspond to self-interested users and machines correspond to	@cite @cite @cite to show	0.0592 (prec)	0.0329 (prec)	0.0884 (prec)	0.1442 (prec)	0.1259 (prec)	0.061 (prec)
	resources. Here each user chooses a machine trying to minimize her own cost, and such selfish behavior typically results in some equilibrium which is not	that even for two machines the price of anarchy is unbounded,	0.0699 (recall) 0.0641 (f-1)	0.035 (recall) 0.0339 (f-1)	0.1329 (recall) 0.1061 (f-1)	0.1049 (recall) 0.1215 (f-1)	0.1259 (recall)	0.0699 (recall) 0.0651 (f-1)
	globally optimal: An equilibrium is an allocation where no user can reduce her	thus suggesting that the notion	- Rouge L:	- Rouge L:	- Rouge L:	- Rouge L:	0.1259 (f-1) - Rouge L:	- Rouge L:
	own cost by moving to another machine, which in general need not minimize	should be refined. Among these,	0.1706 (prec)	0.183 (prec)	0.1389 (prec)	0.3143 (prec)	0.2153 (prec)	0.1758 (prec)
	the makespan, i.e., the maximum load over the machines. We provide tight	the , which considers NE, is	0.2014 (recall)	0.1944 (recall)	0.2083 (recall)	0.2292 (recall)	0.2153 (recall)	0.2014 (recall)
	bounds on two well-studied notions in algorithmic game theory, namely, the	studied in @cite @cite @cite .	0.1847 (f-1)	0.1886 (f-1)	0.1667 (f-1)	0.2651 (f-1)	0.2153 (f-1)	0.1877 (f-1)
	price of anarchy and the strong price of anarchy on machine scheduling setting	The , which considers equilibria	Summary:	Summary:	Summary:	Summary:	Summary:	Summary:
	which lies in between the related and the unrelated machine case. Both notions study the social cost (makespan) of the worst equilibrium compared to	arising in extensive form games, is studied in @cite @cite @cite	We consider the well-studied game-theoretic version of	we study the outcome of natural learning algorithms in	We consider the well-studied game-theoretic version of	There is a large body of literature on the price of anarchy	In @cite, Paes Leme, Syrgkanis, and Tardos studied the price of	In @cite, Paes Leme, Syrgkanis, and Tardos studied games where
	the optimum, with the strong price of anarchy restricting to a stronger form of	@cite . In @cite the authors	machine scheduling in which	atomic congestion games.	machine scheduling in which	@cite @cite, which is closely	anarchy for atomic congestion	players choose their actions
	equilibria. Our results extend a prior study comparing the price of anarchy to	investigate equilibria and the	jobs correspond to self-	we consider the classical	jobs correspond to self-	related to our work. The price of	games. They showed that in	sequentially, and showed that
	the strong price of anarchy for two related machines (Epstein, Acta Informatica	resulting , while @cite focuses on	interested users and machines	machine scheduling game,	interested users and machines	anarchy is defined as the ratio of	almost all such games, the well-	sequential decisions mitigate the
	2010), thus providing further insights on the relation between these concepts.	the equilibria produced by the . A	correspond to resources. Here	where n jobs need to be	correspond to resources. Here	the worst strong Nash equilibria	known multiplicative-weights	worst case outcomes known for
	Our exact bounds give a qualitative and quantitative comparison between the two models. The bounds also show that the setting is indeed easier than the	further distinction is between (randomized) and (deterministic)	each user chooses a machine trying to minimize her own cost,	scheduled on m machines, with the goal of minimizing the	each user chooses a machine trying to minimize her own cost,	to the social optimum @cite. In particular, @cite and @cite	learning algorithm results in	the classical price of anarchy. In @cite, the authors consider a
	two unrelated machines: In the latter, the strong price of anarchy is @math ,	equilibria: in the former, players	and such selfish behavior	makespan, i.e. the maximum	and such selfish behavior	studied the trade-off between	convergence to pure equilibria, and showed that if an authority	job scheduling game with two
	while in ours it is strictly smaller.	choose a probability distribution	typically results in some	load of any machine in the	typically results in some	the high and low price of	can change the order of the jobs	uniformly related parallel
	(2):	over the strategies and regard	equilibrium which is not globally	schedule.	equilibrium which is not globally	anarchy, and showed that the	adaptively to the decisions made	machines (or links). The goal of
	We study the outcome of natural learning algorithms in atomic congestion	their expected cost, in the latter	optimal: An equilibrium is an	the private goal of each job is to	optimal: An equilibrium is an	high price of anarchy can be	by the jobs so far (but cannot	each job is to minimize its own
	games. Atomic congestion games have a wide variety of equilibria often with	they choose deterministically one	allocation where no user can	minimize its own delay and the	allocation where no user can	bounded as a function of the	influence the decisions of the	delay and the social goal is to
	vastly differing social costs. We show that in almost all such games, the well-known multiplicative-weights learning algorithm results in convergence to	strategy. In this work we focus on pure equilibria and in the	reduce her own cost by moving to another machine, which in	social goal is to minimize the maximum delay of any job, that	reduce her own cost by moving to another machine, which in	number of machines and the size of the coalition. In the case	jobs), then there exists an adaptive ordering in which the	minimize the maximum delay of any job, that is, to minimize the
	pure equilibria. Our results show that nat- ural learning behavior can avoid bad	remaining of this section we	general need not minimize the	is, to minimize the makespan of	general need not minimize the	of the network creation game	jobs end up in an optimum	number of jobs that can be
	outcomes predicted by the price of anarchy in atomic congestion games such	write @math to denote the	makespan, i.e., the maximum	the machine running it.	makespan, i.e., the maximum	@cite the trade-offs between	schedule. They further extend	assigned to this machine. The
	as the load-balancing game introduced by Koutsoupias and Pa- padimitriou,	bounds on the price of anarchy	load over the machines. We	we show that in almost all such	load over the machines. We	the low and high prices of	their results to show that players	authors show that in almost all
	which has super-constant price of anarchy and has correlated equilibria that	for mixed equilibria.	provide tight bounds on two	games, the well- known	provide tight bounds on two	anarchy are studied.	can use algorithms with different	mixed Nash equilibria that are
	are exponentially worse than any mixed Nash equilibrium. Our results identify a set of mixed Nash equilibria that we call weakly stable equilibria. Our notion		well-studying notions in	multiplicative-weights learning	well-studies in algorithmic game	Comment:	(sufficiently small) learn-rate,	weakly stable, the Converse is true with probability 1 when
	of weakly stable is defined game-theoretically, but we show that this property		algorithmic game theory, namely, the price of anarchy and	algorithm results in convergence to pure equilibria.	theory, namely, the price of anarchy and the strong price of	- Some signs of MDS, with the information in the 1st article	i.e., they can trade off convergence speed and long	congestion costs are selected at
	holds whenever a stability criterion from the theory of dy- namical systems is		the strong price of anarchy on	furthermore, we show that if an	anarchy on machine scheduling	(yellow) used as context, and	term average regret differently.	random independently on each
	satisfied. This allows us to show that in every congestion game, the		machine scheduling setting	authority can change the order	setting which lies in between the	the 3 rd (blue) and 4 th (purple)	In @cite @cite the authors	edge (from any monotonically
	distribution of play converges to the set of weakly stable equilibria. Pure Nash		which lies in between the	of the jobs adaptively to the	related and the unrelated	articles are included in the	studied the tradeoff between	parametrized distribu-rontal).
	equilibria are weakly stable, and we show using techniques from algebraic		related and the unrelated	decisions made by the jobs so	machine case. Both notions	summary.	the quality of any Nash	The authors also extend their
	geometry that the converse is true with probability 1 when congestion costs are selected at random independently on each edge (from any monotonically		machine case. Both notions study the social cost (makespan)	far (but can not influence the decisions of the jobs) then there	study the social cost (makespan) of the worst equilibrium		equilibrium to the quality of a global optimum, and the	results to the case of two players, and show that for a
	parametrized distribu- tion). We further extend our results to show that		of the worst equilibrium	exists an adaptive ordering in	compared to the optimum, with		sequential price of anarchy.	wide range of speed ratios these
	players can use algorithms with different (sufficiently small) learn- ing rates,		compared to the optimum, with	which the jobs end up in an	the strong Price of anarchy		Comment:	two measures are very different
	i.e. they can trade off convergence speed and long term average regret		the strong price and the weak	optimum schedule.	restricting to a stronger form of			whereas for other speed ratios
	differently.		price of anarchy restricting to a	Comment:	equilibria. Our results extend a			they give the exact same bound.
	(3): A strong equilibrium is a pure Nash equilibrium which is resilient to deviations		stronger form of equilibria. Our results extend a prior study	- Very weak signs of MDS, with	prior study comparing the price of Anarchy to the strong Price Of		(pink) articles summarized.	Comment:
	by coalitions. We define the strong price of anarchy (SPoA) to be the ratio of		comparing the price of Anarchy	and 6th (orange) articles			 This is some mixing of the ideas in the articles, possibly 	- Some signs of MDS, with the 2 nd (green), 3 rd (green), 5 th
	the worst strong equilibrium to the social optimum. Differently from the Price		to the strong price	covered.	machines (Epstein, Acta		because they used the same	(pink) and 6 th (orange) articles
	of Anarchy (defined as the ratio of the worst Nash Equilibrium to the social		Comment:	- However, they are all	Informatica 2010), thus		special terms (e,.g. atomic	summarized.
	optimum), it quantifies the loss incurred from the lack of a central designer in		- Copied the first tokens only		providing further insights on the		congestion, price of anarchy)	- This is some mixing of the ideas
	settings that allow for coordination. We study the SPoA in two settings, namely		- No indication of MDS	document.	relation between these			in the articles, possibly
	job scheduling and network creation. In the job scheduling game we show that for unrelated machines the SPoA can be bounded as a function of the number			 The model also performs like an extractive model 	concepts. Our exact bounds give a qualitative and quantitative			because they used the same special terms (e,.g. atomic
	of machines and the size of the coalition. For the network creation game we			an extractive model	comparison between the two			congestion, price of anarchy)
	show that the SPoA is at most 2. In both cases we show that a strong				models. The bounds also show			,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
	equilibrium always exists, except for a well defined subset of network creation				that the setting is indeed easier			
	games.				than the two unrelated			
	(4): We consider the classical machine scheduling, where n jobs need to be				machines: In the latter Comment:			
	scheduled on m machines, with the goal of minimizing the makespan, i.e., the				- Copied the first tokens only			
	maximum load of any machine in the schedule. We study inefficiency of				- No indication of MDS			
	schedules that are obtained when jobs arrive sequentially one by one, and							
	choose themselves the machine on which they will be scheduled. Every job is							
	only interested to be on a machine with a small load (and does not care about							
	the loads of other machines). We measure the inefficiency of a schedule as the ratio of the makespan obtained in the worst-case equilibrium schedule, and of							
	the optimum makespan. This ratio is known as the sequential price of anarchy.							
	We also introduce alternative inefficiency measures, which allow for a							
	favorable choice of the order in which the jobs make their decisions. We first							
	disprove the conjecture of Hassin and Yovel (OR Letters, 2015) claiming that							
	for unrelated machines, i.e., for the setting where every job can have a							
	different processing time on every machine, the sequential price of anarchy for m = 2 machines is at most 3. We provide an answer for the setting with m = 2							
	and show that the sequential price of anarchy grows at least linearly with the							
	number of players. Furthermore, we show that for a certain order of the jobs,							
	the resulting makespan is at most linearly larger than the optimum makespan.							
	Furthermore, we show that if an authority can change the order of the jobs							