

Anup Anand Deshmukh

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EDUCATION	University of Waterloo, Canada (UW)		<i>Fall 2021</i>
	<i>Degree</i>	MMath in Computer Science (Thesis) - "Unsupervised Syntactic Structure Induction in Natural Language Processing" [Link]	
	<i>CGPA</i>	95.25/100 (4.0/4.0)	
	<i>Supervisor</i>	Prof. Ming Li and Prof. Jimmy Lin	
	<i>Courses</i>	Machine Learning, Deep Learning for NLP, Information Retrieval, Optimization	
	<i>Teaching Assistant</i>	CS 686 (Intro to AI) and CS 115 (Basic Racket Programming)	
	International Institute of Information Technology, Bangalore (IIIT-B)		<i>Summer 2019</i>
	<i>Degree</i>	Integrated Masters in Information Technology	
	<i>CGPA</i>	3.32/4.0, Theoretical CS Major: 3.63/4.0	
	<i>Supervisor</i>	Prof. Dinesh Babu	
PUBLICATIONS	<i>Key Courses</i>	Advanced Machine Perception, Data Structures and Algorithms, Linear Algebra	
	<i>Teaching Assistant</i>	CS 302 (Theory of Automata and Computations) and SP 825 (Visual Recognition)	
	Anup Deshmukh , Qianqiu Zhang, Ming Li, Jimmy Lin, Lili Mou, "Unsupervised Chunking as Syntactic Structure Induction with a Knowledge-Transfer Approach," <i>Findings paper at EMNLP 2021</i> [Link]		
	Rameshwar Pratap, Anup Deshmukh , Pratheeksha Nair, Anirudh Ravi, "Scaling up Simhash," <i>ACML 2020</i> [Link]		
	Anup Deshmukh , Pratheeksha Nair, Shrisha Rao, "A Scalable Clustering Algorithm for Serendipity in Recommender Systems," <i>ICDM 2018 - SAREC</i> [Link]		
	Rameshwar Pratap, Anup Deshmukh , Pratheeksha Nair, Tarun Dutt, "A Faster Sampling Algorithm for Spherical k-means," <i>ACML 2018</i> [Link]		
WORK EXPERIENCE	University of Alberta - Canada		<i>Fall 2020 & Winter 2021</i>
	<i>Co-op: Research Assistant</i>		<i>Guide: Prof. Lili Mou</i>
	<ul style="list-style-type: none">Proposed a knowledge transfer approach for unsupervised chunking, establishing the state-of-the-art results. Achieved an improvement of more than 5% F1 points over the teacher model.Received 'Excellent' and 'Outstanding' evaluations for two co-op terms.		
	FAST lab, CentraleSupélec - France		<i>Summer 2018</i>
	<i>Internship: Research Assistant</i>		<i>Guide: Prof. Renaud Seghier</i>
	<ul style="list-style-type: none">Worked on the problem of detecting emotions, particularly stress, from audio signals in a semi-supervised setting. Proposed Emo-CNN achieved 90.20% categorical accuracy.		
	Slice, Bangalore - India		<i>Summer 2016</i>
	<i>Internship: Full Stack Developer</i>		
	<ul style="list-style-type: none">Led the task of bringing flexibility in payment by building a browser extension using JavaScript. This extension gave access to the payment plans of Slice, right from users' merchant websites.		
PROJECTS	IR-BERT: Leveraging BERT for Semantic Search in Background Linking for News Articles		<i>Winter 2020</i>
	<i>Course: Information Retrieval at UW</i>		<i>Guide: Prof. Gordon Cormack</i>
	<ul style="list-style-type: none">The designed model uses BM25 and Sentence-BERT to understand the context as well as the background of the query article. Outperformed the TREC 2018 median by 7% nDCG@5 points.		
	Unsupervised Text Style Transfer using BERT and Discriminator Networks		<i>Winter 2020</i>
	<i>Course: Deep Learning for NLP at UW</i>		<i>Guide: Prof. Ming Li</i>
	<ul style="list-style-type: none">The proposed model employed polar-constraint for the cross-alignment between different styles and achieved 3% improvement in the classification score on Yelp review dataset.		
	ContentNCF: Content Based Neural Collaborative Filtering		<i>Fall 2019</i>
	<i>Course: Machine Learning at UW</i>		<i>Guide: Prof. Yaoling Yu</i>
	<ul style="list-style-type: none">ContentNCF tailored for Image recommendation, achieved HR of 94% for the task of top-K recommendation on Pinterest dataset. Received a highest score in a class of over 100 students.		
	A Generative Adversarial Network for Diversity in Recommender Systems		<i>Winter 2018</i>
SKILLS	<i>Multimodal perception lab at IIIT-B</i>		<i>Guide: Prof. Dinesh Babu</i>
	<ul style="list-style-type: none">Proposed a GAN+Reinforce framework to produce diverse yet relevant recommendations. Achieved 77% of intra-list diversity in recommendations on Movielens 100k dataset.		
AWARDS & ACTIVITIES	<i>Languages</i>	Python, C++, Matlab, JavaScript, LaTeX	
	<i>Tools</i>	AWS, PyTorch, TensorFlow, Keras, Scikit-learn, Pandas	
	2021	Nominated for Co-op Student of the Year Award, UW	
	2019	International Masters Award for Excellence and Graduate Scholarship, UW	
	2017	Speaker at TEDx Pre-event, IIIT-B	
	2016	Co-Founder of 'Comic Club,' IIIT-B	