

Tema 4

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&

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Aceasta pagina este doar una introductiva restul paginilor reprezinta excelurile printate si imbinate cu paginile de legatura.

PARTEA 1

Exercitiu 1		Tip predictie al saltului	Benchmark				
Marime LVPT	Asociativitate		tomcatv	mgrid	hydro2d	apsi	applu
2	VHT mapat direct	predictibil	91	5287	104	1912	0
		inpredictibil	14	7	350	27266	4
	VHT asociativ	predictibil	91	5449	104	3097	0
		inpredictibil	18	190	952	42783	45
4	VHT mapat direct	predictibil	91	5287	104	1912	0
		inpredictibil	14	7	350	27266	4
	VHT asociativ	predictibil	91	5449	153	14067	0
		inpredictibil	18	190	1112	63411	55
8	VHT mapat direct	predictibil	91	5287	104	1912	0
		inpredictibil	14	7	350	27266	4
	VHT asociativ	predictibil	91	5449	322	39383	1714
		inpredictibil	26	233	1378	124916	978
16	VHT mapat direct	predictibil	91	5287	105	1945	0
		inpredictibil	14	24	450	36614	41
	VHT asociativ	predictibil	121	5479	2698	96093	158229
		inpredictibil	49	263	2547	176197	277468
32	VHT mapat direct	predictibil	94	5287	160	28920	28017
		inpredictibil	21	192	1548	75613	503
	VHT asociativ	predictibil	808	6790	8121	121794	324945
		inpredictibil	386	1127	5080	187371	323469
64	VHT mapat direct	predictibil	135	5529	1445	54413	32889
		inpredictibil	23	226	1771	106121	54755
	VHT asociativ	predictibil	823	7293	11047	241130	325101
		inpredictibil	423	1382	6193	356941	323731
128	VHT mapat direct	predictibil	179	5744	3880	88971	116076
		inpredictibil	118	261	3311	153282	137193
	VHT asociativ	predictibil	888	7493	12387	272367	325367
		inpredictibil	532	1518	6559	388971	324153
256	VHT mapat direct	predictibil	348	6183	5838	141729	208627
		inpredictibil	274	640	4357	237995	284411
	VHT asociativ	predictibil	888	7619	13141	293998	325619
		inpredictibil	542	1604	6844	399458	324306
512	VHT mapat direct	predictibil	630	6938	8692	218710	273018
		inpredictibil	402	1096	5534	309328	298932
	VHT asociativ	predictibil	888	7634	14845	475729	329304
		inpredictibil	542	1633	7372	426642	324702

Ca si concluzie VHT mapat asociativ creste gradul de predictie al salturilor fata de cel mapat direct de asemenea size-ul LVPT-ului

determina cate instructiuni de salt pot fi prezise

Exercitiul 2	((predictable * 100)/classifiedPred + (predictable * 100)/classifiedPred)/2				
Predictor contextual	Benchmark				
Pattern	tomcatv	mgrid	hydro2d	apsi	applu
1	96.31%	99.15%	95.33%	93.67%	87.68%
2	96.31%	99.15%	95.33%	93.67%	87.68%
3	96.31%	99.15%	95.33%	93.67%	87.68%
4	96.31%	99.15%	95.33%	93.67%	87.68%
6	96.31%	99.15%	95.33%	93.67%	87.68%
8	96.31%	99.15%	95.33%	93.67%	87.68%

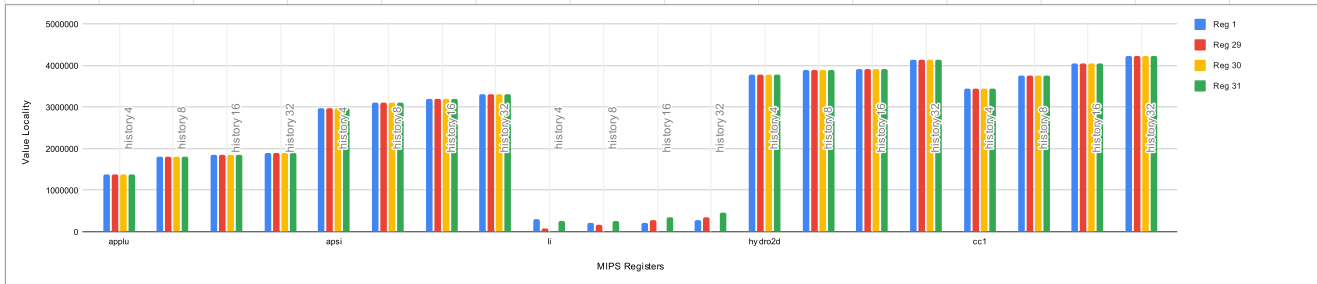
Din oarecare motive patternul nu influenteaza acuratetea de predictie a predictorului contextual

Scriptul folosit pentru calcularea valorilor se poate gasi la: <https://pastebin.com/YjSEHCHU>

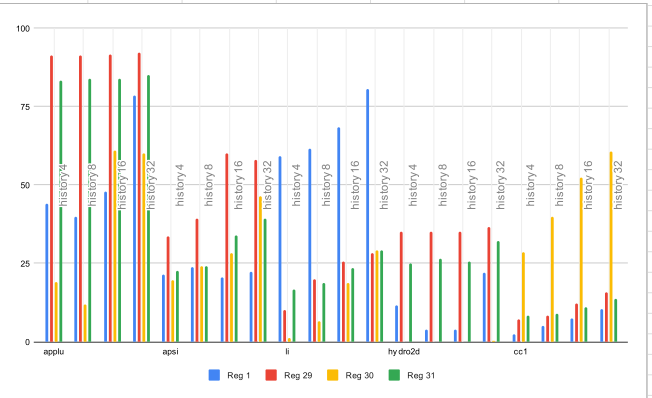
Exercitiul 3	((predictable * 100)/classifiedPred + (predictable * 100)/classifiedPred)/2					
Predictor hibrid	Benchmark					
Indexare tabela	Pattern	tomcatv	mgrid	hydro2d	apsi	applu
Instr. adr.	1	58.78%	21.21%	47.34%	84%	86.45%
	2	58.78%	21.21%	47.34%	84%	86.45%
	3	58.78%	21.21%	47.34%	84%	86.45%
	4	58.78%	21.21%	47.34%	84%	86.45%
	6	58.78%	21.21%	47.34%	84%	86.45%
	8	58.78%	21.21%	47.34%	84%	86.45%
	1	26.5%	10.85%	40.57%	49.65%	0.47%

PARTEA 2

Exercitiul 1	aplu				apsi				li				hydro2d				cc1			
	history 4	history 8	history 16	history 32	history 4	history 8	history 16	history 32	history 4	history 8	history 16	history 32	history 4	history 8	history 16	history 32	history 4	history 8	history 16	history 32
Reg 1	1384116	1797858	1846553	1894901	2964982	3097991	3195160	3308550	293572	207537	220183	283883	3779538	3883002	3924089	4130396	3434941	3757185	4041967	4233010
Reg 29	1384116	1797858	1846553	1894901	2964982	3097991	3195160	3308550	71516	163066	285266	344682	3779538	3883002	3924089	4130396	3434941	3757185	4041967	4233010
Reg 30	1384116	1797858	1846553	1894901	2964982	3097991	3195160	3308550	45	124	311	1304	3779538	3883002	3924089	4130396	3434941	3757185	4041967	4233010
Reg 31	1384116	1797858	1846553	1894901	2964982	3097991	3195160	3308550	262382	262007	335449	450144	3779538	3883002	3924089	4130396	3434941	3757185	4041967	4233010



Exercitiul 2		history 4			history 8			history 16			history 32		
		ValuePrediction	num_loads	Raport	ValuePrediction	num_loads	Raport	ValuePrediction	num_loads	Raport	ValuePrediction	num_loads	Raport
APPLU	Reg1	109	248	43,9516129	99	248	39,91935484	119	248	47,98387097	195	248	78,62903226
	Reg29	13843	15172	91,24044292	13852	15172	91,29976272	13894	15172	91,57658845	13975	15172	92,11046665
	Reg30	21	110	19,09090909	13	110	11,81818182	67	110	60,90909091	66	110	60
	Reg31	7301	8757	83,37330136	7333	8757	83,73872331	7333	8757	83,73872331	7441	8757	84,97202238
APSI	Reg1	19476	90908	21,42385709	21556	90908	23,71188454	18547	90908	20,40194482	20241	90908	22,26536718
	Reg29	143596	425521	33,74592558	166861	425521	39,21334082	255555	425521	60,05696546	246704	425521	57,97692711
	Reg30	8609	43542	19,77171467	10552	43542	24,23407285	12349	43542	28,36112259	20192	43542	46,37361628
	Reg31	103801	457039	22,71162855	110724	457039	24,22637893	154669	457039	33,84153212	179349	457039	39,24150893
LI	Reg1	206534	348271	59,30266947	214002	348271	61,44697664	237838	348271	68,29107218	280570	348271	80,56082763
	Reg29	106460	1059652	10,04669458	211552	1059652	19,96429016	272179	1059652	25,68569681	300854	1059652	28,3917739
	Reg30	47	3886	1,209469892	249	3886	6,407617087	725	3886	18,65671642	1129	3886	29,05301081
	Reg31	186866	1119762	16,68801049	209935	1119762	16,74818042	264611	1119762	23,63100373	326833	1119762	29,18772025
HYDRO2D	Reg1	28413	247286	11,48993473	9468	247286	3,828765074	9477	247286	3,832404584	54098	247286	21,87669338
	Reg29	232310	662895	35,04476576	233434	662895	35,21432504	233332	662895	35,19893799	242970	662895	36,65286358
	Reg30	24	38218	0,06279763462	20	38218	0,05233136219	36	38218	0,09419645193	57	38218	0,1491443822
	Reg31	178432	710050	25,12949792	188131	710050	26,49545807	181852	710050	25,61115414	228789	710050	32,22153369
CC1	Reg1	8202	329587	2,488569027	16905	329587	5,129146477	24407	329587	7,405328487	34621	329587	10,50435849
	Reg29	27910	384534	7,258135822	31571	384534	8,210197278	46745	384534	12,15627227	60703	384534	15,78612034
	Reg30	25657	89558	28,64847361	35630	89558	39,78427388	47004	89558	52,4844235	54304	89558	60,63556578
	Reg31	34035	410056	8,300085842	36315	410056	8,856107458	45280	410056	11,04239421	56410	410056	13,75665763



Exercitiul 2	aplu				apsi				li				hydro2d				cc1			
	history 4	history 8	history 16	history 32	history 4	history 8	history 16	history 32	history 4	history 8	history 16	history 32	history 4	history 8	history 16	history 32	history 4	history 8	history 16	history 32
Reg 1					19,09090909	11,81818182	60,90909091	60	19,77171467	24,23407285	28,36112259	46,37361628	1,209469892	6,407617087	18,65671642	29,05301081	0,06279763462	0,05233136219	0,09419645193	0,1491443822
Reg 29	Raport	Raport	Raport	Raport	83,37330136	83,73872331	83,73872331	84,97202238	22,71162855	24,22637893	33,84153212	39,24150893	16,68801049	18,74818042	23,63100373	29,18772025	25,12949792	26,49545807	25,61115414	32,22153369
Reg 30	43,9516129	39,91935484	47,98387097	78,62903226	21,42385709	23,71188454	20,40194482	22,26536718	59,30266947	61,44697664	68,29107218	80,56082763	11,48993473	3,828765074	3,832404584	21,87669338	2,488569027	5,129146477	7,405328487	10,50435849
Reg 31	91,24044292	91,29976272	91,57658845	92,11046665	33,74592558	39,21334082	60,05696546	57,97692711	10,04669458	19,96429016	25,68569681	28,3917739	35,04476576	35,21432504	35,19893799	36,65286358	7,258135822	8,210197278	12,15627227	15,78612034

Exercitiul 3	Context	0			1			2			3		
	Param	ValuePrediction	num_loads	Raport	ValuePrediction	num_loads	Raport	ValuePrediction	num_loads	Raport	ValuePrediction	num_loads	Raport
APPLU	Reg1	94	248	37,90322581	191	248	77,01612903	191	248	77,01612903	202	248	81,4516129
	Reg29	0	15172	0	14709	15172	96,94832586	14709	15172	96,94832586	14767	15172	97,33060902
	Reg30	0	110	0	58	110	52,72727273	58	110	52,72727273	70	110	63,63636364
	Reg31	785	8757	8,964257166	8050	8757	91,92645883	8050	8757	91,92645883	8205	8757	93,69647139
APSI	Reg1	1170	90908	1,287015444	73510	90908	80,86197034	73510	90908	80,86197034	77495	90908	85,24552295
	Reg29	0	425521	0	369547	425521	86,84577259	369547	425521	86,84577259	376542	425521	88,48963976
	Reg30	315	43542	0,7234394378	39893	43542	91,61958569	40172	43542	92,26034633	40007	43542	91,88140186
	Reg31	98136	457039	21,4721282	372200	457039	81,43725153	372200	457039	81,43725153	389600	457039	85,24436645



