

Table 2: Detection performance of Gitor with complexity, code struct and ex class references.

	Complexity: comp heff hdif hvoc mdn				Code Struct: nos nopr noa nexp nand mdn loop comp				Ex Class References: exct excr cref cast			
Cosine = 0.50	16	32	64	128	16	32	64	128	16	32	64	128
T-1 Recall	1	1	1	1	1	1	1	1	1	1	1	1
T-2 Recall	1	1	1	1	1	1	1	1	1	1	1	1
VST-3 Recall	1	0.999	0.999	1	1	1	1	1	1	1	1	1
ST-3 Recall	0.997	0.997	0.999	0.999	0.999	0.999	0.999	0.999	0.999	0.999	0.999	0.999
MT-3 Recall	0.979	0.981	0.989	0.992	0.997	0.996	0.997	0.996	0.996	0.997	0.997	0.996
Type-4 Recall	0.865	0.825	0.818	0.844	0.97	0.973	0.972	0.939	0.960	0.973	0.968	0.940
Precision	0.690	0.702	0.703	0.694	0.681	0.697	0.676	0.684	0.688	0.680	0.677	0.683
F1	0.786	0.784	0.784	0.785	0.804	0.803	0.801	0.799	0.807	0.804	0.800	0.799
Cosine = 0.60	16	32	64	128	16	32	64	128	16	32	64	128
T-1 Recall	1	1	1	1	1	1	1	1	1	1	1	1
T-2 Recall	1	1	1	1	1	1	1	1	1	1	1	1
VST-3 Recall	0.999	0.999	0.999	0.999	1	1	1	1	1	1	1	1
ST-3 Recall	0.997	0.997	0.997	0.999	0.999	0.999	0.999	0.999	0.999	0.999	0.999	0.999
MT-3 Recall	0.975	0.972	0.975	0.987	0.996	0.995	0.996	0.994	0.994	0.995	0.995	0.994
Type-4 Recall	0.81	0.751	0.740	0.770	0.994	0.951	0.948	0.893	0.925	0.951	0.994	0.894
Precision	0.699	0.716	0.716	0.705	0.702	0.703	0.700	0.717	0.719	0.705	0.701	0.716
F1	0.778	0.774	0.772	0.774	0.813	0.815	0.812	0.811	0.820	0.816	0.812	0.811
Cosine = 0.70	16	32	64	128	16	32	64	128	16	32	64	128
T-1 Recall	1	1	1	1	1	1	1	1	1	1	1	1
T-2 Recall	1	1	1	1	1	1	1	1	1	1	1	1
VST-3 Recall	0.999	0.999	0.999	0.999	1	1	1	0.999	1	1	1	0.999
ST-3 Recall	0.997	0.996	0.997	0.997	0.999	0.999	0.999	0.999	0.999	0.999	0.999	0.999
MT-3 Recall	0.972	0.962	0.961	0.970	0.987	0.988	0.990	0.987	0.982	0.986	0.990	0.986
Type-4 Recall	0.730	0.653	0.637	0.669	0.887	0.899	0.893	0.801	0.851	0.902	0.895	0.805
Precision	0.713	0.732	0.731	0.723	0.745	0.747	0.748	0.760	0.770	0.749	0.748	0.758
F1	0.767	0.755	0.750	0.756	0.827	0.831	0.830	0.814	0.832	0.833	0.831	0.814
Cosine = 0.80	16	32	64	128	16	32	64	128	16	32	64	128
T-1 Recall	1	1	1	1	1	1	1	1	1	1	1	1
T-2 Recall	1	1	1	1	1	1	1	1	1	1	1	1
VST-3 Recall	0.999	0.998	0.998	0.999	0.999	0.998	0.999	0.999	0.999	0.998	0.999	0.999
ST-3 Recall	0.996	0.991	0.991	0.994	0.993	0.992	0.996	0.998	0.992	0.992	0.994	0.998
MT-3 Recall	0.957	0.933	0.930	0.945	0.900	0.899	0.926	0.950	0.887	0.897	0.919	0.951
Type-4 Recall	0.610	0.512	0.492	0.520	0.741	0.765	0.749	0.631	0.670	0.771	0.765	0.638
Precision	0.734	0.749	0.750	0.744	0.803	0.806	0.805	0.808	0.828	0.809	0.800	0.805
F1	0.743	0.717	0.710	0.719	0.812	0.820	0.818	0.786	0.801	0.823	0.820	0.787
Cosine = 0.90	16	32	64	128	16	32	64	128	16	32	64	128
T-1 Recall	1	1	1	0.999	1	1	1	0.999	1	1	1	0.999
T-2 Recall	1	1	1	1	1	1	1	1	1	1	1	1
VST-3 Recall	0.999	0.998	0.998	0.998	0.999	0.998	0.998	0.998	0.999	0.998	0.998	0.998
ST-3 Recall	0.989	0.984	0.984	0.986	0.985	0.983	0.987	0.985	0.980	0.983	0.987	0.985
MT-3 Recall	0.895	0.818	0.805	0.840	0.810	0.804	0.792	0.754	0.754	0.800	0.794	0.759
Type-4 Recall	0.412	0.314	0.294	0.303	0.411	0.437	0.415	0.327	0.325	0.449	0.448	0.336
Precision	0.769	0.789	0.797	0.807	0.889	0.888	0.883	0.886	<b>0.904</b>	0.880	0.880	0.882
F1	0.686	0.643	0.633	0.648	0.717	0.726	0.714	0.669	0.674	0.728	0.727	0.673
Cosine = 0.93	16	32	64	128	16	32	64	128	16	32	64	128
T-1 Recall	1	1	1	0.999	1	1	1	0.999	1	1	1	0.999
T-2 Recall	1	1	1	1	1	1	1	1	1	1	1	1
VST-3 Recall	0.999	0.998	0.998	0.998	0.999	0.998	0.998	0.998	0.999	0.998	0.998	0.998
ST-3 Recall	0.983	0.942	0.941	0.974	0.979	0.977	0.976	0.962	0.971	0.976	0.975	0.961
MT-3 Recall	0.834	0.705	0.689	0.727	0.737	0.722	0.681	0.636	0.649	0.713	0.691	0.641
Type-4 Recall	0.321	0.232	0.215	0.218	0.265	0.281	0.264	0.202	0.191	0.296	0.292	0.210
Precision	0.792	0.815	0.816	0.849	<b>0.924</b>	<b>0.918</b>	<b>0.917</b>	<b>0.921</b>	<b>0.932</b>	<b>0.909</b>	<b>0.909</b>	<b>0.918</b>
F1	0.649	0.594	0.583	0.601	0.645	0.649	0.633	0.591	0.590	0.653	0.647	0.596
Cosine = 0.96	16	32	64	128	16	32	64	128	16	32	64	128
T-1 Recall	1	1	1	0.999	1	1	1	0.999	1	1	1	0.999
T-2 Recall	1	1	1	1	1	1	1	1	1	1	1	1
VST-3 Recall	0.999	0.998	0.998	0.998	0.995	0.997	0.997	0.997	0.998	0.997	0.998	0.997
ST-3 Recall	0.966	0.911	0.911	0.920	0.949	0.945	0.916	0.912	0.904	0.941	0.938	0.912
MT-3 Recall	0.678	0.532	0.512	0.544	0.561	0.534	0.477	0.449	0.450	0.516	0.491	0.458
Type-4 Recall	0.202	0.137	0.125	0.121	0.111	0.120	0.105	0.079	0.073	0.131	0.121	0.084
Precision	0.829	0.880	0.869	<b>0.905</b>	<b>0.962</b>	<b>0.955</b>	<b>0.961</b>	<b>0.962</b>	<b>0.965</b>	<b>0.946</b>	<b>0.954</b>	<b>0.960</b>
F1	0.579	0.522	0.509	0.520	0.528	0.526	0.503	0.479	0.475	0.528	0.517	0.484
Cosine = 0.99	16	32	64	128	16	32	64	128	16	32	64	128
T-1 Recall	1	1	1	0.999	1	1	1	0.999	1	1	1	0.999
T-2 Recall	1	1	1	1	1	1	1	1	1	1	1	1
VST-3 Recall	0.992	0.987	0.967	0.968	0.981	0.976	0.974	0.926	0.962	0.973	0.972	0.926
ST-3 Recall	0.680	0.596	0.588	0.609	0.738	0.713	0.686	0.653	0.657	0.707	0.688	0.662
MT-3 Recall	0.286	0.203	0.195	0.198	0.130	0.128	0.104	0.097	0.089	0.132	0.103	0.104
Type-4 Recall	0.043	0.031	0.028	0.022	0.006	0.007	0.005	0.004	0.004	0.009	0.006	0.004
Precision	<b>0.937</b>	<b>0.964</b>	<b>0.965</b>	<b>0.969</b>	<b>0.996</b>	<b>0.996</b>	<b>0.995</b>	<b>0.998</b>	<b>0.997</b>	<b>0.991</b>	<b>0.997</b>	<b>0.997</b>
F1	0.398	0.364	0.359	0.357	0.333	0.332	0.321	0.316	0.314	0.334	0.321	0.319