

Table 6: Precisions with different temporal window length  $\gamma$  for the activeness based approach. (Best results in bold.)

Project	Temporal window	Top-1	Top-2	Top-3	Top-4	Top-5
rails	7 days	0.364	0.297	0.259	0.222	0.194
	15 days	0.384	0.314	0.271	0.232	0.201
	30 days	0.384	0.319	0.275	0.236	0.206
	60 days	0.388	0.322	<b>0.277</b>	<b>0.239</b>	<b>0.209</b>
	no time limit	<b>0.393</b>	<b>0.324</b>	0.276	0.238	<b>0.209</b>
symfony	7 days	0.557	0.467	0.37	0.301	0.257
	15 days	0.568	0.48	0.383	0.312	0.265
	30 days	0.58	0.49	0.386	0.316	0.27
	60 days	0.582	<b>0.496</b>	<b>0.387</b>	<b>0.318</b>	0.272
	no time limit	<b>0.591</b>	0.495	0.386	<b>0.318</b>	<b>0.274</b>
scala	7 days	0.628	0.467	0.394	0.334	0.288
	15 days	0.647	0.481	0.398	0.341	0.296
	30 days	0.654	0.484	<b>0.4</b>	0.342	0.297
	60 days	<b>0.655</b>	<b>0.486</b>	0.399	<b>0.343</b>	<b>0.298</b>
	no time limit	0.654	0.475	0.389	0.341	0.297
bitcoin	7 days	0.681	0.572	0.483	0.419	0.37
	15 days	<b>0.702</b>	0.589	0.504	0.441	0.388
	30 days	0.7	0.593	0.508	0.447	0.395
	60 days	<b>0.702</b>	<b>0.6</b>	0.512	0.449	0.399
	no time limit	0.698	0.599	<b>0.516</b>	<b>0.451</b>	<b>0.401</b>
zf2	7 days	0.589	0.392	0.3	0.241	0.201
	15 days	0.606	0.406	0.314	0.254	0.213
	30 days	0.608	<b>0.408</b>	0.319	0.258	0.219
	60 days	<b>0.612</b>	0.407	<b>0.322</b>	0.261	0.222
	no time limit	0.569	0.399	<b>0.322</b>	<b>0.266</b>	<b>0.228</b>
akka	7 days	0.778	0.648	0.55	0.478	0.41
	15 days	0.797	0.661	0.565	0.488	0.419
	30 days	0.793	0.67	0.567	0.493	0.424
	60 days	<b>0.807</b>	<b>0.675</b>	0.57	0.496	0.426
	no time limit	0.798	0.672	<b>0.572</b>	<b>0.497</b>	<b>0.428</b>
cakephp	7 days	0.626	0.476	0.383	0.327	0.279
	15 days	0.66	0.494	0.402	0.342	0.296
	30 days	0.675	0.505	0.407	0.342	0.292
	60 days	<b>0.713</b>	0.51	0.41	0.348	0.297
	no time limit	0.685	<b>0.516</b>	<b>0.428</b>	<b>0.367</b>	<b>0.313</b>
gitlabhq	7 days	0.596	0.466	0.377	0.316	0.271
	15 days	0.621	0.485	0.393	0.334	0.287
	30 days	0.652	<b>0.499</b>	<b>0.409</b>	0.343	0.295
	60 days	<b>0.662</b>	<b>0.499</b>	<b>0.409</b>	<b>0.348</b>	<b>0.298</b>
	no time limit	0.64	0.496	0.402	0.342	0.294

Table 7: Recalls with different temporal window length  $\gamma$  for the activeness based approach. (Best results in bold.)

Project	Temporal window	Top-1	Top-2	Top-3	Top-4	Top-5
rails	7 days	0.219	0.347	0.442	0.5	0.54
	15 days	0.233	0.37	0.466	0.522	0.559
	30 days	0.231	0.374	0.473	0.53	0.575
	60 days	0.232	0.376	<b>0.476</b>	0.537	<b>0.583</b>
	no time limit	<b>0.235</b>	<b>0.381</b>	0.475	<b>0.538</b>	<b>0.583</b>
symfony	7 days	0.306	0.484	0.565	0.607	0.638
	15 days	0.311	0.499	0.587	0.63	0.659
	30 days	0.318	0.511	0.591	0.636	0.672
	60 days	0.321	<b>0.519</b>	<b>0.593</b>	0.64	0.677
	no time limit	<b>0.327</b>	0.518	<b>0.593</b>	<b>0.641</b>	<b>0.682</b>
scala	7 days	0.359	0.508	0.625	0.694	0.737
	15 days	0.373	0.527	0.631	0.71	0.757
	30 days	0.378	0.53	0.634	0.712	0.758
	60 days	<b>0.38</b>	<b>0.532</b>	<b>0.635</b>	<b>0.713</b>	<b>0.764</b>
	no time limit	<b>0.38</b>	0.517	0.613	0.703	0.76
bitcoin	7 days	0.316	0.5	0.613	0.691	0.748
	15 days	<b>0.326</b>	0.518	0.642	0.729	0.786
	30 days	0.325	0.521	0.65	0.742	0.799
	60 days	<b>0.326</b>	<b>0.533</b>	0.653	0.744	0.808
	no time limit	<b>0.326</b>	<b>0.533</b>	<b>0.66</b>	<b>0.745</b>	<b>0.811</b>
zf2	7 days	0.449	0.566	0.634	0.67	0.692
	15 days	0.463	0.588	0.661	0.707	0.734
	30 days	0.465	<b>0.593</b>	0.67	0.714	0.754
	60 days	<b>0.469</b>	0.592	<b>0.682</b>	<b>0.726</b>	<b>0.759</b>
	no time limit	0.409	0.548	0.644	0.696	0.735
akka	7 days	0.417	0.631	0.754	0.847	0.889
	15 days	0.433	0.648	0.782	0.871	0.913
	30 days	0.431	0.657	0.784	0.881	0.922
	60 days	<b>0.439</b>	0.661	0.787	0.885	0.929
	no time limit	0.435	<b>0.662</b>	<b>0.791</b>	<b>0.887</b>	<b>0.933</b>
cakephp	7 days	0.376	0.546	0.641	0.714	0.748
	15 days	0.399	0.569	0.674	0.747	0.795
	30 days	0.431	0.622	0.72	0.785	0.824
	60 days	<b>0.467</b>	<b>0.627</b>	<b>0.727</b>	<b>0.8</b>	0.839
	no time limit	0.416	0.596	0.714	0.796	<b>0.841</b>
gitlabhq	7 days	0.341	0.514	0.604	0.66	0.699
	15 days	0.355	0.534	0.625	0.697	0.739
	30 days	0.376	<b>0.554</b>	0.656	0.718	0.76
	60 days	<b>0.381</b>	0.551	<b>0.657</b>	<b>0.728</b>	<b>0.765</b>
	no time limit	0.368	0.55	0.65	0.721	0.757