Table 1. Effectiveness of seven LogTCP techniques

Metrics	Approach	1	2	3	4	5	6	7	8	9	10	Average
APFD	$\text{LogTCP}_{count}^{total}$	0.7208	0.7004	0.7151	0.8282	0.6965	0.7821	0.7052	0.8806	0.7651	0.9198	0.7714
	$\text{LogTCP}_{count}^{additional}$	0.7362	**0.7576**	0.7302	0.8312	**0.7005**	0.7921	0.7145	0.8540	0.7857	0.9293	0.7831
	$\text{LogTCP}_{count}^{arp}$	0.7503	0.7478	0.7284	0.8476	**0.7005**	0.7852	0.7129	0.8823	0.7878	0.9364	0.7879
	$\text{LogTCP}_{ordering}^{total}$	0.7194	0.7076	0.7169	0.8336	0.6990	0.7886	0.7045	0.8734	0.7725	0.9218	0.7737
	$\text{LogTCP}_{ordering}^{additional}$	0.7397	0.7499	0.7151	0.8306	0.6896	0.8030	**0.7260**	0.8809	0.7884	**0.9385**	0.7862
	$\text{LogTCP}_{ordering}^{arp}$	0.7557	0.7466	0.7267	0.8433	0.6950	0.8084	0.7135	0.8834	0.7841	**0.9385**	0.7895
	$\text{LogTCP}_{semantics}^{arp}$	**0.7740**	0.7496	**0.7444**	**0.8633**	0.6931	**0.8187**	0.7136	0.8764	**0.8132**	0.9230	**0.7969**
RAUC-25%	$\text{LogTCP}_{count}^{total}$	0.5205	0.5113	0.8814	0.8866	**0.9361**	0.7534	0.6111	**0.9358**	0.7208	0.8471	0.7604
	$\text{LogTCP}_{count}^{additional}$	0.6316	**0.7438**	**0.9583**	0.9005	**0.9361**	0.7835	0.6882	0.8626	0.7880	0.8556	0.8148
	$\text{LogTCP}_{count}^{arp}$	0.6215	0.7395	0.9199	0.9252	**0.9361**	0.7803	0.7421	0.9268	0.7898	0.8578	0.8239
	$\text{LogTCP}_{ordering}^{total}$	0.5526	0.5241	0.9006	0.9127	0.9292	0.7751	0.6127	0.9291	0.7208	0.8505	0.7707
	$\text{LogTCP}_{ordering}^{additional}$	0.6807	0.7224	0.9231	0.8988	0.9064	**0.8292**	0.7043	0.9280	0.7650	**0.8671**	0.8225
	$\text{LogTCP}_{ordering}^{arp}$	**0.7094**	0.7353	0.9135	0.9200	0.9064	0.8201	0.7116	0.9327	0.7580	0.8670	0.8274
	$\text{LogTCP}_{semantics}^{arp}$	0.6919	0.7402	0.8944	**0.9704**	0.8493	0.8257	0.6789	0.9073	**0.9149**	0.8184	**0.8291**
RAUC-50%	$\text{LogTCP}_{count}^{total}$	0.6646	0.7033	0.8989	0.8927	0.9126	0.8302	0.7071	0.9436	0.8194	0.8836	0.8256
	$\text{LogTCP}_{count}^{additional}$	0.7094	**0.8495**	0.9303	0.8934	**0.9160**	0.8525	0.7312	0.8798	0.8775	0.8981	0.8538
	$\text{LogTCP}_{count}^{arp}$	0.7221	0.8416	0.9180	0.9243	0.9143	0.8424	**0.7536**	0.9497	0.8732	0.9069	0.8646
	$\text{LogTCP}_{ordering}^{total}$	0.6591	0.7258	0.8989	0.9053	0.9092	0.8367	0.7052	0.9405	0.8279	0.8872	0.8296
	$\text{LogTCP}_{ordering}^{additional}$	0.7132	0.8377	0.8948	0.8998	0.8958	**0.8760**	0.7457	0.9501	0.8661	0.9099	0.8589
	$\text{LogTCP}_{ordering}^{arp}$	0.7482	0.8430	0.9180	0.9180	0.8958	0.8701	0.7419	**0.9528**	0.8633	**0.9109**	0.8662
	$\text{LogTCP}_{semantics}^{arp}$	**0.7813**	0.8184	0.8828	**0.9716**	0.8891	0.8726	0.7342	0.9382	**0.9447**	0.8818	**0.8715**
RAUC-75%	$\text{LogTCP}_{count}^{total}$	0.7467	0.8044	0.8897	0.9087	0.9243	0.8838	0.7557	0.9441	0.8710	0.9102	0.8639
	$\text{LogTCP}_{count}^{additional}$	0.7699	**0.9023**	0.9167	0.9129	0.9247	0.9011	0.7687	0.9045	0.9053	0.9226	0.8829
	$\text{LogTCP}_{count}^{arp}$	0.7858	0.8876	0.9085	0.9352	**0.9372**	0.8910	0.7764	**0.9498**	0.9032	0.9327	0.8907
	$\text{LogTCP}_{ordering}^{total}$	0.7435	0.8170	0.8930	0.9171	0.9291	0.8877	0.7557	0.9399	0.8773	0.9130	0.8673
	$\text{LogTCP}_{ordering}^{additional}$	0.7754	0.8887	0.8881	0.9124	0.9123	**0.9176**	**0.7875**	0.9479	0.9003	0.9350	0.8865
	$\text{LogTCP}_{ordering}^{arp}$	0.7935	0.8882	0.9085	0.9296	0.9180	0.9145	0.7699	0.9494	0.8986	**0.9354**	0.8906
	$\text{LogTCP}_{semantics}^{arp}$	**0.8216**	0.8739	0.8808	**0.9593**	0.9195	0.9093	0.7708	0.9393	**0.9469**	0.9146	**0.8936**
RAUC-100%	$\text{LogTCP}_{count}^{total}$	0.8061	0.8610	0.9036	0.9264	0.9408	0.9126	0.8112	0.9545	0.8961	0.9313	0.8944
	$\text{LogTCP}_{count}^{additional}$	0.8233	**0.9316**	0.9229	0.9298	0.9381	0.9243	0.8219	0.9255	0.9205	0.9410	0.9079
	$\text{LogTCP}_{count}^{arp}$	0.8349	0.9195	0.9206	0.9478	0.9448	0.9162	0.8202	0.9564	0.9230	0.9481	0.9132
	$\text{LogTCP}_{ordering}^{total}$	0.8046	0.8699	0.9058	0.9326	**0.9461**	0.9136	0.8105	0.9467	0.9049	0.9333	0.8968
	$\text{LogTCP}_{ordering}^{additional}$	0.8272	0.9221	0.9036	0.9292	0.9273	**0.9371**	**0.8352**	0.9548	0.9237	**0.9503**	0.9111
	$\text{LogTCP}_{ordering}^{arp}$	0.8415	0.9180	0.9183	0.9430	0.9374	0.9366	0.8208	**0.9575**	0.9186	0.9502	0.9142
	$\text{LogTCP}_{semantics}^{arp}$	**0.8612**	0.9116	0.9011	**0.9656**	0.9347	0.9274	0.8210	0.9499	**0.9537**	0.9345	**0.9161**