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APPENDIX 2

Machine Learning-Based Estimation of Modal Properties of a Transmission Tower in Bataan, Philippines

Table A1. Identified damping ratios – PV Stage.

	ξ (%)					
	ML-Based SSI					**NExT-**
Mode	**RF**	**XG**	**KNN**	**DT**	**SSI-BA**	**ERA**
1	1.268	1.269	1.271	1.271	1.322	1.456
2	1.075	1.077	1.085	1.077	1.232	0.983
3	2.006	2.005	2.018	1.993	2.122	2.322
4	2.215	2.218	2.222	2.224	2.456	2.982
5	1.548	1.546	1.561	1.525	1.322	1.298
6	1.32	1.322	1.336	1.321	1.355	1.321
7	1.228	1.239	1.260	1.243	1.225	1.546
8	1.784	1.772	1.796	1.789	1.673	1.674
9	1.687	1.697	1.724	1.721	1.678	1.715
10	1.432	1.439	1.461	1.410	1.320	1.292

Table A2. Identified damping ratios – FI Stage.

	ξ (%)					
	ML-Based SSI					**NExT-**
Mode	**RF**	**XG**	**KNN**	**DT**	**SSI-BA**	**ERA**
1	3.018	3.019	3.027	3.020	3.045	3.074
2	2.511	2.524	2.549	2.525	2.022	2.108
3	1.568	1.568	1.575	1.568	1.628	1.666
4	1.691	1.693	1.696	1.697	2.018	2.177
5	0.845	0.850	0.855	0.856	0.851	0.934
6	1.438	1.447	1.442	1.439	NA[1]	NA
7	1.815	1.845	1.875	1.822	2.006	2.117
8	1.936	1.946	1.955	1.952	2.106	2.051
9	0.822	0.826	0.826	0.827	NA	NA
10	0.678	0.678	0.684	0.686	0.922	1.008

[1]NA - Not Applicable