

TABLE 14 Neurons, Weights and Biases for the Second Hidden Layer of the ANN Model in this Study

Second Hidden Layer	First Hidden Layer																				
	Neuron	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
	1	-0.1406	-0.5220	0.2620	0.0433	0.0436	0.2505	0.0772	0.3252	0.4780	-0.2089	0.1207	0.3259	-0.0076	-0.3707	0.2342	0.1582	-0.4062	0.2941	0.2141	-0.4805
	2	-0.0641	0.3851	-0.0597	0.2090	-0.2911	0.2493	0.0592	0.4414	0.1089	0.0300	0.0559	-0.1437	0.0879	0.1158	0.1559	0.3365	0.3371	-0.0560	0.2150	-0.0775
	3	0.1139	0.3216	-0.0013	0.2787	0.0364	0.1226	-0.4049	0.2608	0.1083	-0.2419	0.1292	-0.1896	-0.0055	-0.2848	0.2669	0.2151	0.0622	0.4145	-0.0195	-0.2681
	4	-0.3921	0.2468	-0.2404	0.0857	-0.1646	-0.1200	-0.2069	-0.2492	0.0629	-0.2256	-0.3930	0.0401	-0.0819	-0.3141	0.0236	0.1730	-0.2725	-0.3016	-0.0239	-0.3218
	5	-0.3081	0.2905	-0.2567	0.2731	-0.2699	-0.0662	0.0145	-0.4032	-0.3600	-0.2934	0.0785	0.2710	-0.0830	0.1712	-0.0867	0.3642	-0.0871	-0.4488	-0.1178	0.1331
	6	0.0524	0.5694	0.3378	-0.0142	-0.1306	0.3685	0.1986	0.0699	-0.3546	0.3959	0.2108	0.3006	0.3608	0.0919	0.2979	-0.1522	0.1566	0.3083	0.2956	0.1799
	7	0.1532	0.4936	0.1777	-0.0361	-0.3961	0.0101	0.0091	0.3864	0.2972	-0.2380	0.1046	-0.2154	-0.1241	0.3974	-0.0636	-0.0613	0.3664	0.0290	0.4316	-0.1164
	8	-0.2971	0.2172	-0.4004	-0.3254	0.2207	-0.0646	-0.0109	0.3193	0.3355	0.2138	0.1669	-0.0251	-0.1417	-0.0079	-0.1347	-0.1352	-0.1244	-0.1763	-0.2312	0.0903
	9	-0.2667	-0.5043	-0.4362	0.2141	0.1282	0.2850	0.4435	0.0080	0.3238	-0.4930	-0.3327	-0.1548	-0.1791	0.2022	-0.3028	-0.0363	-0.1057	-0.1486	0.1679	-0.0762
	10	-0.3028	-0.0350	-0.0890	-0.0354	0.3422	0.2009	-0.2660	0.0356	-0.1812	0.2848	-0.1420	0.3929	-0.2222	0.1075	-0.0936	-0.2289	0.3026	0.1279	0.0528	-0.0947
	11	0.2781	-0.1349	0.0426	0.0235	-0.2321	-0.1963	-0.1786	0.1776	-0.4179	-0.3884	0.0947	-0.4087	0.0784	-0.1527	0.1976	0.1873	0.3724	0.4615	0.3817	0.4288
	12	-0.3314	0.1522	-0.0697	-0.1476	-0.2753	0.2824	-0.4825	-0.3862	-0.2801	-0.2798	-0.4228	0.1474	-0.2675	-0.2088	0.0903	-0.1468	0.0241	-0.0179	0.0285	0.2227
	13	-0.0243	-0.3137	0.3234	0.3165	0.2108	-0.0599	-0.1065	-0.2375	0.0897	0.2386	0.2943	-0.3956	0.4071	-0.1538	0.1853	0.0392	0.1325	-0.2416	0.2460	-0.3155
	14	-0.4207	-0.4424	-0.4699	0.2896	-0.1649	0.1521	-0.1741	0.0379	-0.2452	-0.0617	-0.2094	-0.3117	0.3083	0.3793	0.3327	0.0777	-0.4512	-0.0947	0.2239	0.1765
	15	0.1307	0.1257	0.0679	-0.2171	-0.1956	0.0543	0.1855	0.1408	-0.0027	-0.2647	-0.4571	-0.0934	0.0649	0.3730	-0.0351	-0.2535	0.4531	0.1238	-0.0314	0.1276
	16	0.1312	0.1767	0.2067	-0.3377	-0.1273	0.4508	-0.0290	-0.2301	0.2660	-0.0051	0.2071	-0.2144	-0.0116	-0.0501	-0.3595	0.3049	0.0258	0.1592	-0.1188	0.4361
	17	0.0100	0.5449	0.3225	0.3089	0.1688	0.0145	0.2309	0.3835	0.2629	-0.2570	0.2010	-0.1687	0.3562	0.2249	-0.3358	0.2508	-0.2291	0.0774	-0.2082	0.3325
	18	-0.2277	-0.0677	-0.0486	-0.3494	-0.3043	0.2349	-0.1302	-0.0291	0.2950	-0.4888	0.2906	-0.0258	0.2462	0.2469	-0.4652	0.1856	0.0874	0.2405	-0.3172	-0.2777
	19	-0.1043	0.0572	-0.0568	0.2316	0.0118	0.4908	0.1115	0.2316	0.1884	0.1855	-0.1505	-0.3323	-0.3209	-0.1386	-0.1029	0.2485	-0.1091	0.1514	0.4495	0.0753
	20	-0.2704	-0.3722	0.2123	0.0795	-0.1884	0.1651	-0.4748	-0.3302	-0.1993	-0.0650	-0.2008	0.2241	-0.1425	0.0771	0.0132	-0.2348	-0.1603	-0.1179	0.0771	0.0409

	21	-0.4568	0.2047	0.0152	-0.3129	-0.4263	0.1829	-0.3396	0.0342	-0.3056	0.0135	0.2356	-0.3022	-0.1676	0.0394	0.3372	0.4071	0.1740	-0.3581	-0.0536	-0.0808
	22	-0.0709	-0.1581	-0.2812	0.3837	-0.1724	0.3719	0.3878	0.0189	-0.2325	-0.2006	0.4298	-0.3183	-0.3252	0.1380	-0.0273	-0.0010	0.1012	0.0870	0.3157	-0.1116
	23	0.0786	0.2550	-0.3996	0.1617	0.4286	-0.3293	0.2945	-0.6878	-0.0589	0.0038	0.3619	-0.5059	-0.3676	-0.1545	-0.0067	0.1836	-0.0754	-0.2292	0.0969	0.0506
	24	0.0422	0.0068	-0.1938	0.1053	-0.2720	0.0101	-0.0283	0.2374	-0.2937	-0.0122	0.1374	0.3433	-0.1765	0.2998	-0.0573	0.2604	0.1388	0.2053	-0.2033	0.5564
	25	0.2520	0.3857	-0.3463	-0.3316	-0.2794	-0.3172	-0.0038	-0.0044	-0.4220	-0.1891	-0.2214	-0.4116	0.0366	-0.0049	-0.0745	0.1595	0.0171	0.1823	-0.0339	0.3030
	26	0.0248	0.3386	0.0091	0.0098	-0.2635	0.4802	-0.0837	-0.0436	0.0693	0.3055	0.1646	0.3271	0.3730	0.0243	-0.4007	0.3458	-0.1571	0.2863	-0.1073	0.4638
	27	-0.1794	-0.3931	0.3003	-0.4865	-0.3378	0.2500	0.3262	-0.2257	-0.0038	-0.1156	-0.0936	-0.0671	-0.2760	-0.2080	0.4135	0.3486	-0.2006	0.2483	0.2931	-0.1503
	28	0.1610	0.2878	0.2982	-0.1795	0.2950	0.0791	-0.3599	-0.1901	-0.1720	0.3546	0.3006	0.0699	0.1269	0.1191	0.0898	0.4007	0.0054	-0.2089	0.2814	0.3455
	29	-0.2899	-0.0251	0.1417	0.1799	0.2286	-0.0092	-0.2084	-0.2463	-0.2812	0.1181	-0.3383	-0.0005	-0.3666	0.1527	0.2171	-0.0763	0.1146	-0.2853	0.3364	-0.1187
	30	0.0222	0.0368	0.3488	0.3453	-0.3677	0.1315	-0.2404	0.2383	-0.0613	-0.2496	-0.0408	0.1619	0.0431	-0.2558	0.0675	0.1443	0.4499	0.4638	0.2888	0.0531
	31	-0.0876	-0.3058	-0.3741	-0.1372	0.2921	0.0369	-0.2710	0.0701	-0.0215	-0.1588	0.3393	-0.4207	0.3685	0.1215	-0.3683	0.1407	-0.0506	-0.3704	0.2876	0.0111
	32	0.2372	0.1311	-0.1026	0.0616	-0.1637	0.1571	-0.1361	0.3294	-0.1954	0.0055	-0.0174	-0.2463	0.2527	-0.2722	-0.4205	0.1578	0.0866	-0.0876	0.4029	0.4013
	33	0.3074	0.5796	0.2672	0.1706	0.0452	0.2762	-0.1420	-0.2147	0.0023	0.1806	-0.1328	-0.0393	0.3985	0.1586	0.1846	0.2657	0.2756	0.4651	-0.2641	0.4316
	34	0.1582	0.4017	0.1298	0.2009	-0.2780	-0.2077	-0.1437	-0.2995	-0.3896	0.0455	0.0544	0.3745	-0.0589	0.2888	-0.2097	0.0206	0.1857	-0.2535	-0.5150	0.1893
	35	-0.2777	-0.1416	-0.0215	-0.0303	0.1246	-0.1345	0.0066	-0.2876	0.4103	-0.0667	0.1351	-0.2339	0.0424	-0.1074	-0.1454	0.0655	-0.5144	-0.1339	-0.3041	-0.1637
	36	0.0803	0.0987	0.4278	0.1621	0.0003	0.4169	0.1084	-0.4187	0.3001	0.2790	-0.2786	0.1928	-0.2995	-0.1375	-0.4427	-0.2169	0.1860	-0.0640	-0.0608	0.0502
	37	-0.0223	0.1187	0.1217	0.2629	0.2363	-0.2881	-0.1345	-0.0720	0.0416	-0.1344	0.1771	0.1962	-0.2916	0.2605	-0.2993	-0.1979	0.1469	-0.0677	0.2635	-0.0695
	38	0.3396	0.1540	-0.2236	-0.0463	-0.1797	0.2892	-0.3870	0.2219	0.2963	-0.0250	0.2840	0.3957	0.1636	-0.0511	-0.3449	-0.2259	0.1768	-0.0775	0.1079	0.0958
	39	0.0267	0.2729	-0.1904	-0.2475	-0.3583	0.0162	-0.3899	-0.1279	0.1726	-0.1347	-0.1325	0.0407	-0.1970	-0.0160	-0.4419	-0.3002	0.1439	0.2575	0.0403	-0.0307

Second Hidden Layer	First Hidden Layer																				
	Neuron	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
1	0.0768	-0.2115	0.0147	-0.0994	-0.0585	-0.3543	-0.1715	0.2062	0.3290	0.2921	-0.5487	-0.3978	0.5125	-0.1825	-0.0264	-0.0328	0.3035	-0.1804	-0.2091	0.1079	-0.1644

2	0.4092	0.5371	0.3804	0.0179	0.0640	0.3294	-0.3631	-0.2145	-0.1189	0.3614	-0.0715	0.3624	0.1609	0.4641	0.1006	0.4432	-0.2340	-0.3445	0.3538	-0.0251	0.4134
3	-0.3651	-0.2190	-0.0987	0.4580	0.2708	0.2857	0.2903	0.3870	-0.2020	-0.1909	0.1149	-0.1917	0.2763	-0.2033	-0.4119	0.4892	-0.1086	0.1483	0.0987	0.0931	0.2474
4	0.1350	-0.2927	0.2175	0.1051	-0.2861	-0.0382	-0.3253	0.3285	0.1030	-0.1720	0.3702	-0.2329	-0.1797	0.1661	0.0731	0.0200	-0.0478	0.0874	0.3169	0.1547	-0.0280
5	-0.2425	0.0364	0.0037	-0.2898	-0.1407	0.1771	0.2238	-0.2577	-0.4197	0.1141	0.2041	-0.2762	0.0760	0.1236	0.0119	0.2809	-0.1828	-0.1005	-0.3647	0.3120	-0.0463
6	0.4142	0.1872	0.2236	0.3866	-0.1688	-0.3020	0.2444	0.3114	-0.1808	0.2120	0.1345	-0.2245	-0.3553	-0.0980	-0.2091	0.3503	0.1050	0.3917	0.3177	0.0107	0.3189
7	0.0223	0.4778	0.3185	0.1326	-0.2195	-0.2555	-0.4893	-0.2962	0.1763	0.5453	-0.0360	-0.2170	0.2171	0.1882	-0.4124	0.2948	-0.2496	0.0910	-0.0572	0.2494	0.3130
8	0.3333	0.0980	0.3247	-0.2698	-0.3194	-0.0073	0.1240	-0.4326	-0.1819	-0.0623	-0.3973	0.0911	0.1929	-0.0298	0.3843	0.0455	-0.3282	-0.2059	-0.2972	-0.3177	-0.1035
9	0.3598	0.3110	0.2687	-0.3894	-0.0076	0.2168	-0.2589	-0.0210	-0.0376	-0.5393	-0.2733	-0.1299	0.2692	0.0982	-0.0028	0.2771	-0.1642	0.3826	-0.4205	0.0409	-0.1543
10	-0.0953	0.0665	0.3227	-0.3548	-0.2585	0.1379	-0.4123	-0.2009	-0.2568	-0.2654	0.0734	0.2714	0.3240	0.1576	-0.1206	0.1251	0.3158	-0.3566	-0.3726	0.2681	-0.2014
11	0.0458	0.0744	-0.1277	-0.2280	0.0205	-0.1742	0.3784	-0.0088	-0.1059	0.0576	0.1523	0.3100	-0.2735	0.3601	-0.2291	0.1558	-0.4212	-0.0450	-0.1154	0.3918	0.3126
12	0.2147	0.1505	0.2628	0.0269	-0.1339	0.3442	0.2972	-0.1315	0.3019	-0.0895	-0.1776	0.0536	-0.3029	-0.1803	0.0692	-0.0582	0.3272	-0.3341	-0.3433	-0.2139	-0.1349
13	0.3632	-0.2730	-0.2979	-0.3590	-0.2084	-0.1768	0.3498	0.4246	0.1995	0.2020	0.0999	0.1912	-0.3977	0.2876	-0.1727	-0.4491	-0.2983	0.3381	-0.0804	0.2067	-0.1565
14	0.1828	0.3223	-0.2847	-0.1042	-0.0538	-0.0545	-0.1139	-0.0173	0.1147	0.1866	-0.2594	-0.1400	0.0958	-0.2323	0.2645	-0.0352	0.0840	0.2827	-0.1351	-0.2243	-0.1283
15	0.3233	0.3846	0.2227	0.2052	0.1877	0.0643	0.2911	0.2369	0.3335	0.3638	-0.0743	-0.0556	-0.4286	0.4726	-0.2963	0.4134	0.3043	0.0039	0.0831	-0.2960	0.3516
16	0.1076	0.4335	-0.1987	0.3943	0.0108	0.1632	0.0260	-0.2115	-0.1259	0.4290	0.1836	0.0185	-0.0354	0.0629	-0.4009	0.3964	0.3355	-0.2840	-0.0638	-0.3073	0.3290
17	0.0945	-0.0016	0.0906	0.1655	0.3999	-0.1266	0.1329	-0.2400	0.0474	-0.0254	-0.3284	0.3026	-0.4537	0.1651	0.2115	-0.0801	-0.2859	0.3218	-0.1546	0.4495	0.3774
18	0.0656	0.0566	-0.4382	-0.0410	0.0271	0.1031	0.1107	0.4151	-0.1047	-0.1403	-0.2433	-0.3944	0.3803	-0.0117	0.2807	0.2279	0.3073	-0.2450	0.2814	0.2454	-0.1655
19	-0.2544	-0.3225	0.2706	0.2289	0.1437	0.1439	0.2801	0.3142	0.0274	-0.2264	-0.3394	-0.1081	-0.4067	0.3922	-0.3898	0.2621	-0.2371	-0.1866	-0.0031	0.2040	0.3144
20	0.3372	0.1532	0.3816	0.1402	0.0152	0.4948	-0.3293	-0.4918	0.4262	-0.5084	-0.5253	0.3098	0.3345	-0.1641	-0.3705	-0.1531	0.2976	-0.1324	-0.3610	0.0824	-0.0927
21	-0.3999	-0.4606	-0.3476	0.0986	0.0051	0.0378	-0.0709	-0.0559	-0.2388	0.4424	0.1879	-0.4341	0.0372	-0.0603	0.1180	0.0371	-0.1459	0.0330	0.3200	0.2854	-0.1162
22	-0.1028	-0.3448	-0.1991	-0.1618	0.2872	-0.3268	0.0497	-0.3798	-0.2699	-0.4961	0.2881	-0.3615	-0.0233	-0.2507	0.3174	-0.2758	0.2484	0.0631	0.3159	-0.2641	-0.0715
23	-0.3099	-0.0873	0.0028	0.1242	-0.6426	-0.2623	-0.2061	0.0927	-0.0629	-0.4159	-0.0286	-0.4137	0.1579	-0.3793	-0.0194	-0.1521	0.3298	-0.3829	-0.0159	-0.1715	-0.0265
24	-0.2692	0.3070	0.0665	-0.2796	-0.1868	0.4225	0.0645	0.3148	0.3030	0.3923	0.0418	-0.1556	-0.1325	-0.1062	-0.2433	0.1793	-0.3519	0.2869	0.2944	-0.2146	0.3654
25	-0.1678	-0.3027	0.3130	-0.3195	0.2117	-0.3045	-0.3834	-0.2386	-0.4193	0.2101	0.0036	0.0073	0.3075	-0.0898	-0.0688	-0.0589	-0.0459	-0.1477	-0.1263	-0.0533	0.0114

26	0.1722	0.2609	-0.0387	0.0130	0.1732	0.3656	-0.0309	0.1643	0.3881	0.3819	0.2843	-0.2041	-0.3372	-0.1243	-0.2628	0.1515	-0.0367	-0.3337	-0.2197	0.1892	0.3510
27	-0.0566	-0.3334	0.3504	-0.3445	0.0224	0.2836	0.2706	-0.0897	-0.1879	-0.1814	-0.4275	0.0805	0.0043	0.1290	0.2662	-0.0484	0.2067	0.2821	0.0961	0.3103	-0.1659
28	0.0355	0.2943	0.3186	0.0362	0.0576	-0.0247	-0.1003	0.0155	0.2863	0.1684	0.1270	0.2510	-0.3091	0.0321	0.0459	-0.0124	0.0469	-0.3546	0.3117	0.2399	0.3114
29	-0.0427	0.0004	-0.3161	-0.2563	0.0967	-0.1734	0.2595	-0.1448	-0.1880	-0.0135	-0.1192	-0.0035	-0.3545	0.1559	0.0771	-0.5105	0.2219	-0.1221	-0.1376	-0.3183	-0.0795
30	-0.2031	0.1744	-0.1012	0.0341	0.2824	-0.3173	0.2654	0.2101	-0.1753	0.3096	0.0469	0.1292	-0.4504	0.2142	0.0907	-0.2426	-0.2603	-0.1283	-0.2757	0.4494	0.3747
31	-0.1771	-0.3055	-0.2837	-0.3544	0.1830	-0.0731	0.2997	0.4541	-0.0374	0.2708	0.1544	0.1015	0.1715	0.1272	0.1744	-0.2146	0.1630	0.2823	0.2248	-0.4986	-0.1474
32	-0.2729	-0.4100	-0.0402	-0.2369	0.3211	-0.4620	-0.3468	-0.4386	0.2452	0.1687	-0.2917	-0.1681	0.2985	0.3626	0.1712	-0.0989	0.1732	-0.0771	-0.2158	0.0572	0.2211
33	0.1280	-0.0678	0.4240	0.2189	0.3553	0.3110	0.3399	0.3294	-0.0337	0.0175	-0.0358	0.2161	0.2083	-0.1373	0.0923	0.1798	-0.0126	0.3294	0.3085	0.0494	0.2954
34	-0.1181	0.4813	0.2657	-0.2980	-0.1540	0.0114	-0.5148	0.3089	0.0464	0.2665	0.1773	-0.2325	-0.0546	-0.2807	0.0767	-0.1897	-0.0663	-0.0438	0.3282	0.1695	0.2822
35	0.4581	0.3894	0.1499	-0.2715	-0.2068	-0.1187	-0.1987	-0.2565	0.3042	-0.1692	0.0147	0.3637	0.1131	0.2892	0.2375	0.3863	0.3747	0.0534	0.0752	0.2193	-0.1500
36	-0.3805	-0.2995	0.2911	0.1375	0.3437	-0.3888	0.2640	0.0043	-0.1504	0.4632	-0.3192	-0.1903	0.1491	0.4511	0.1718	-0.0885	0.2726	0.3631	0.1532	-0.2430	0.2411
37	-0.1288	0.4878	0.3445	-0.0369	0.1648	-0.1732	0.1582	-0.2456	0.2495	0.0618	0.1647	0.3431	-0.2958	0.1673	0.0529	-0.1069	-0.2629	0.0394	0.2848	0.4427	0.3552
38	0.1515	0.2402	-0.2384	0.3824	0.0711	-0.1920	0.3547	0.2359	-0.0921	0.1478	0.0240	0.0551	-0.2322	0.1581	0.0075	0.0301	-0.2963	0.2191	-0.0286	0.1005	0.3033
39	-0.0981	-0.3711	0.0208	0.3721	0.2402	-0.1475	-0.4202	-0.2950	0.0904	-0.1111	0.0284	0.3176	-0.0301	0.4134	-0.0569	0.4671	-0.1343	-0.0426	0.3297	0.0781	0.2472