

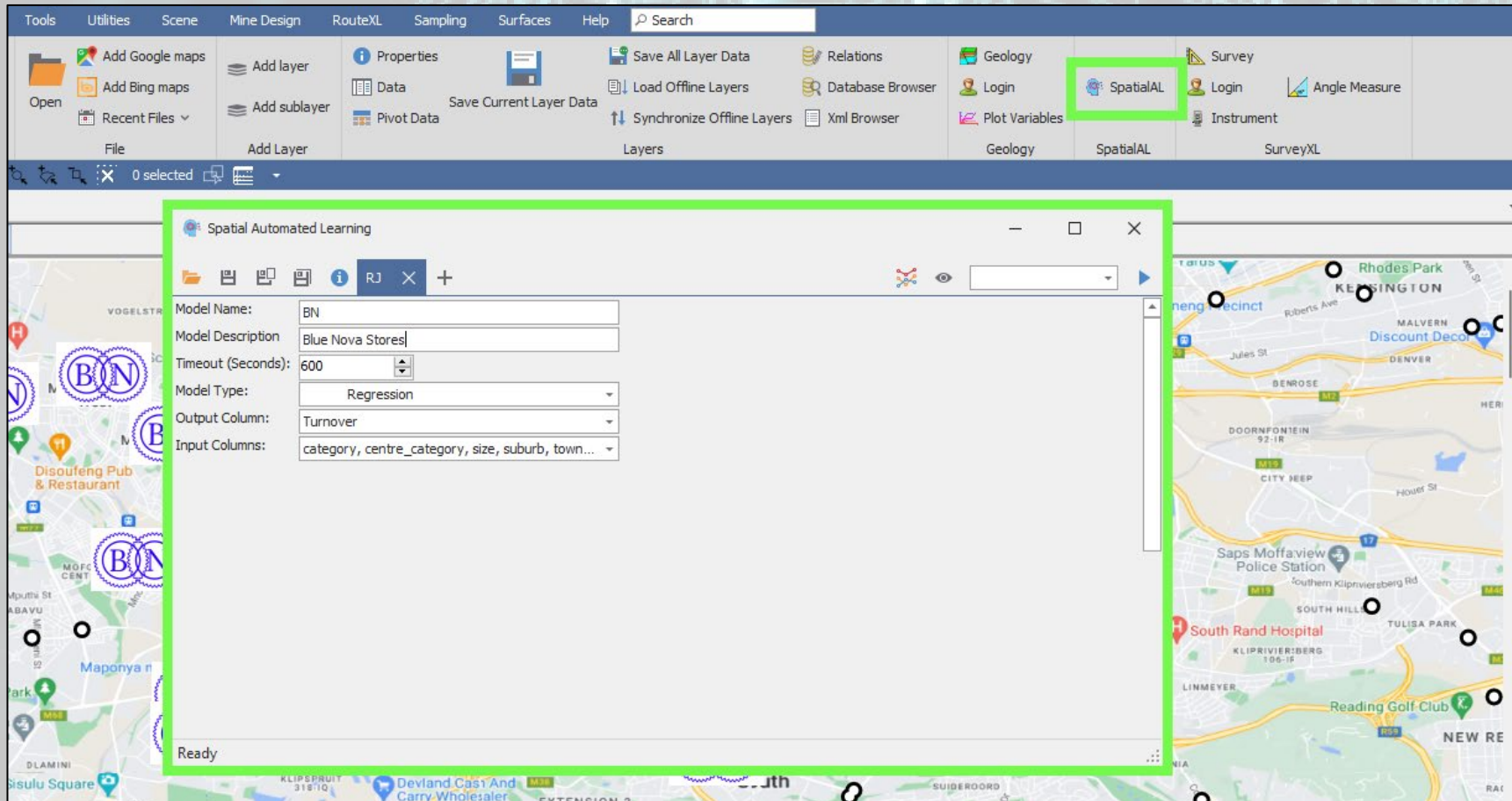


SpatialAL

The Latest PrimeThought Software Solutions Product

What is it?

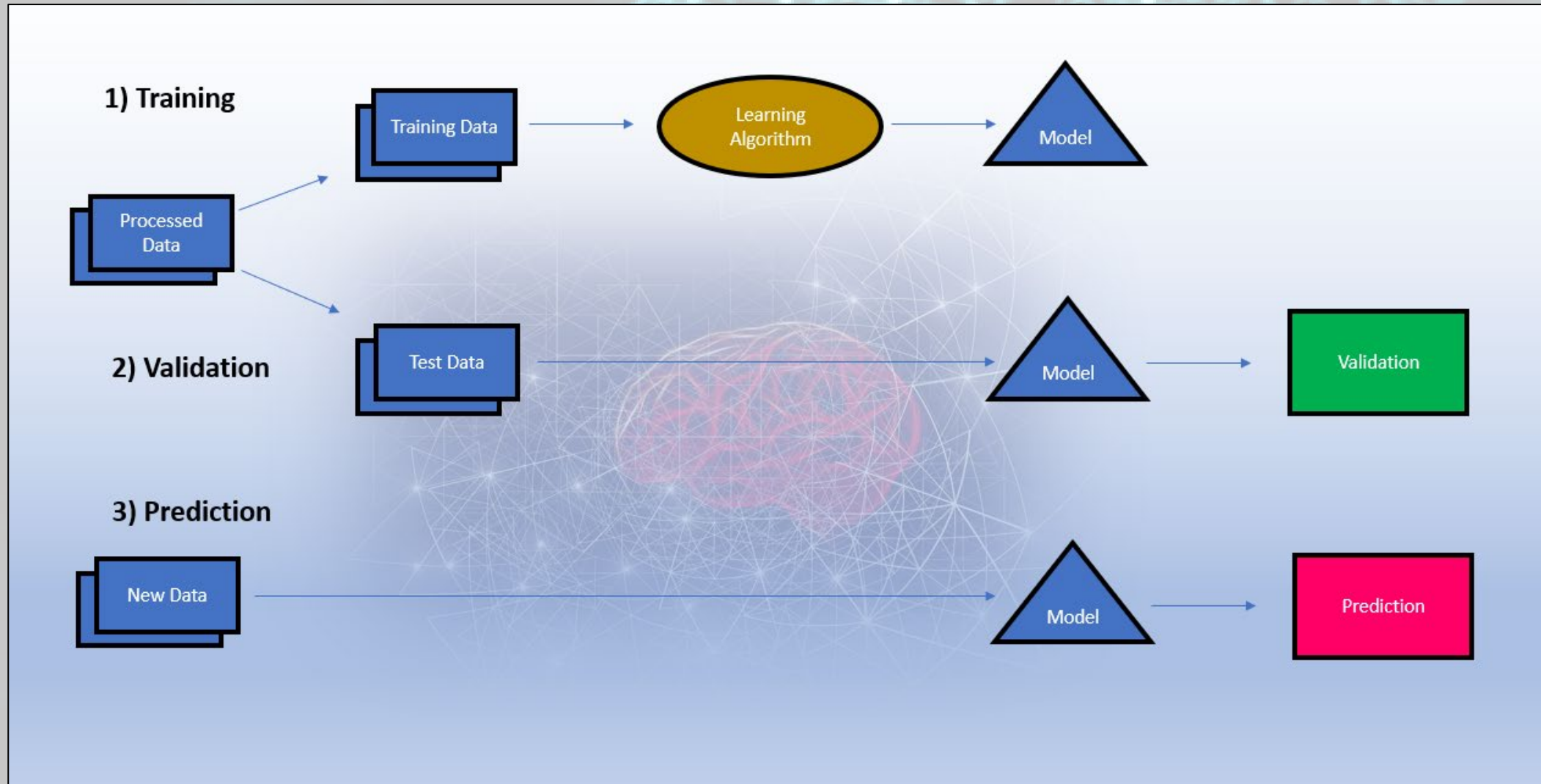
- SpatialAL(Automated Learning) is a tool that plugs into our other products that performs automated machine learning to predict profitability, turnover etc. for things like potential new store locations etc.



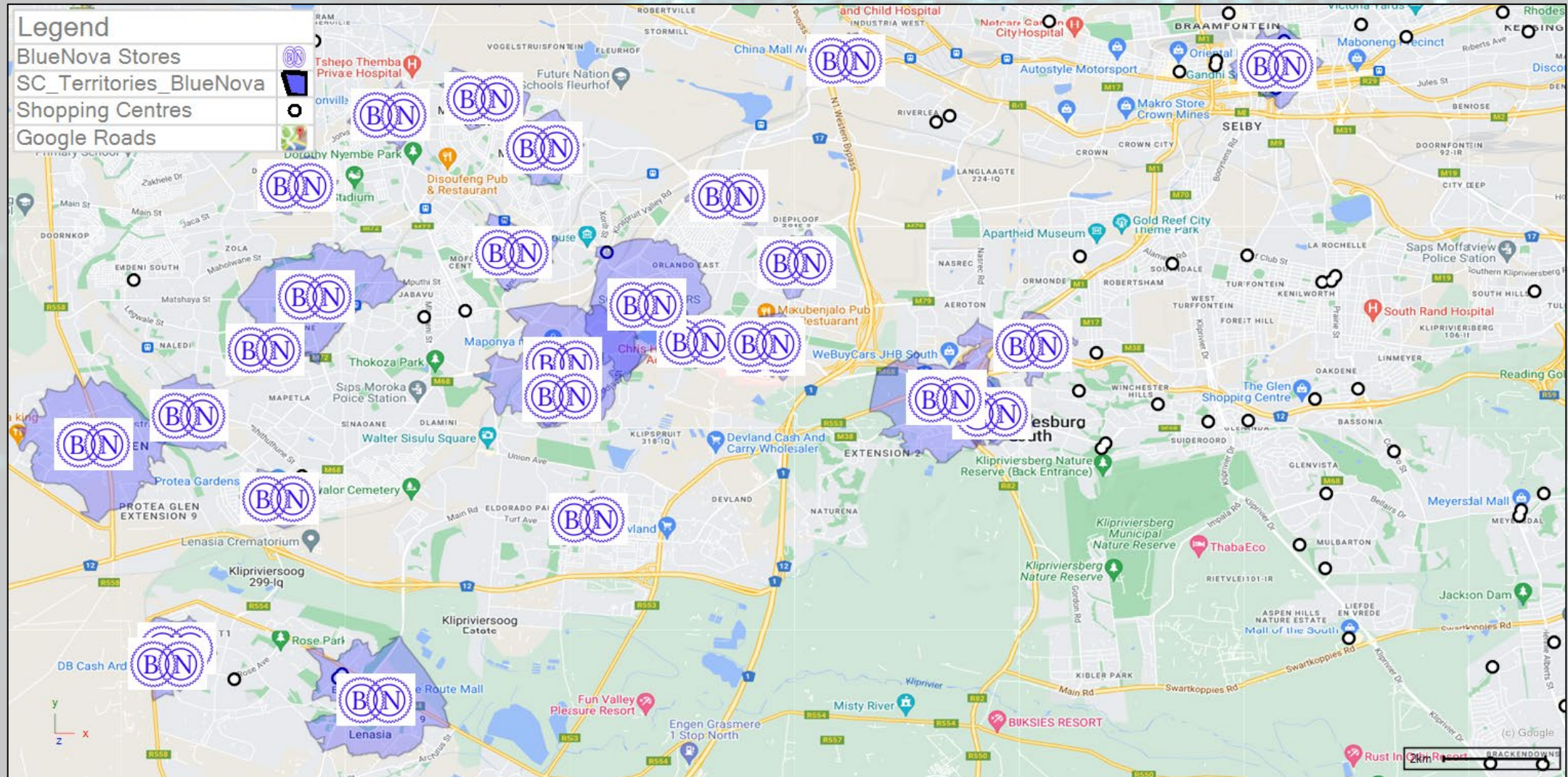
How it works

- The profitability of a store is driven by a number of factors, some of them environmental.
- We don't have access to all the factors that lead to success or failure (for instance if the store is in a busy isle of the shopping center) but we put in all the factors that we do have access to (NLI, demographics, day-night population etc.) and this is aggregated into the territory of each store. (Existing and new sites).
- Using Machine Learning we take all the variables and let the computer analyze them and find patterns and see which variables influence profitability and calculate a fit for that.
- The more data we put into the Machine Learning algorithm the more accurate or better our fit is likely to be.
- To test our fit, we run the current stores through the algorithm and test the variance.
- The variance between predicted and actual will test whether you have relevant factors in your data.
- Once this test is successful, we apply this model to all the new store locations to predict profitability.

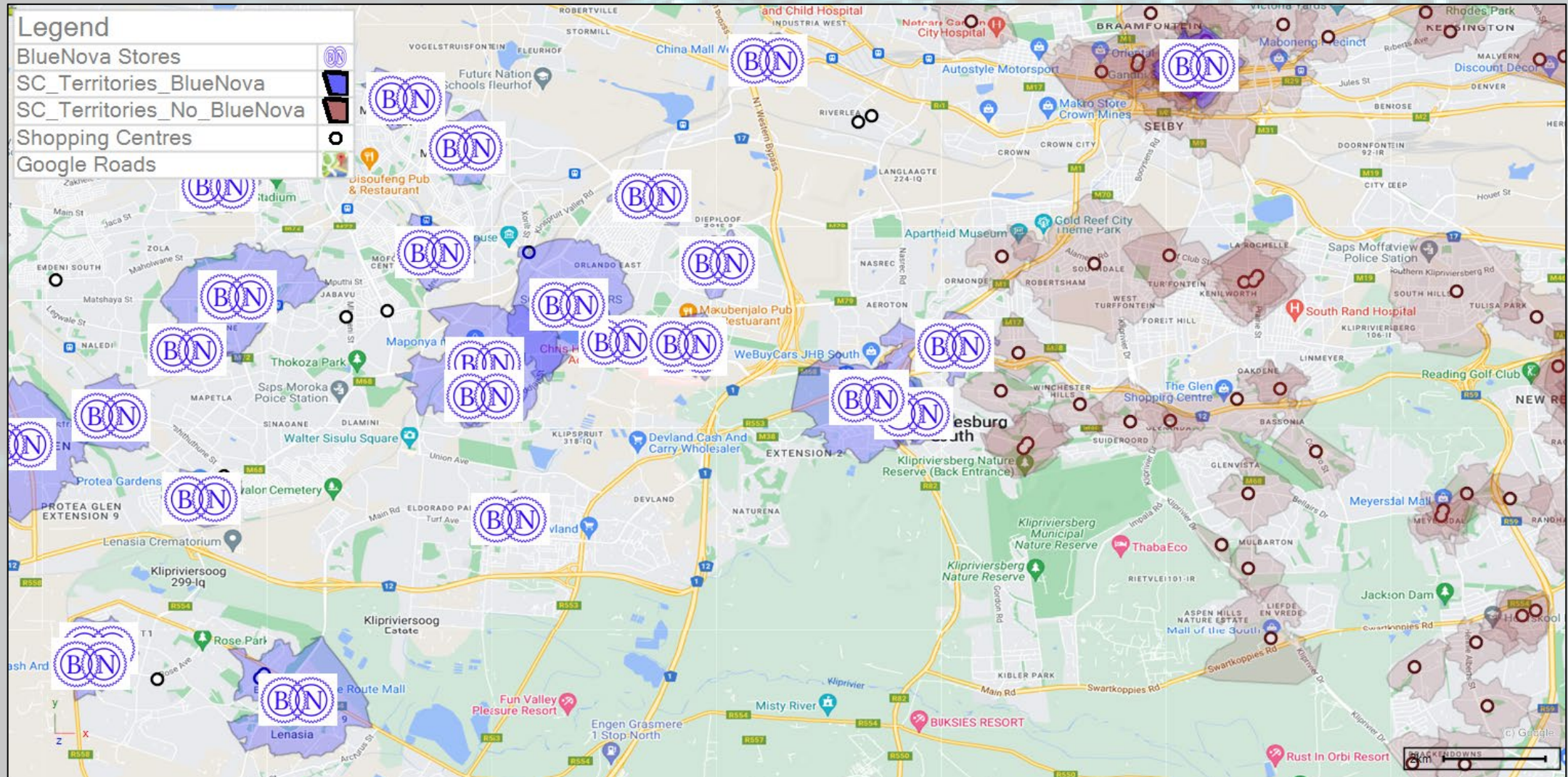
Illustrative Graphic of Machine Learning



Current Stores Shopping Centre Territories



Potential New Store Shopping Centre Territories



Input Data underlying current and potential new store territories

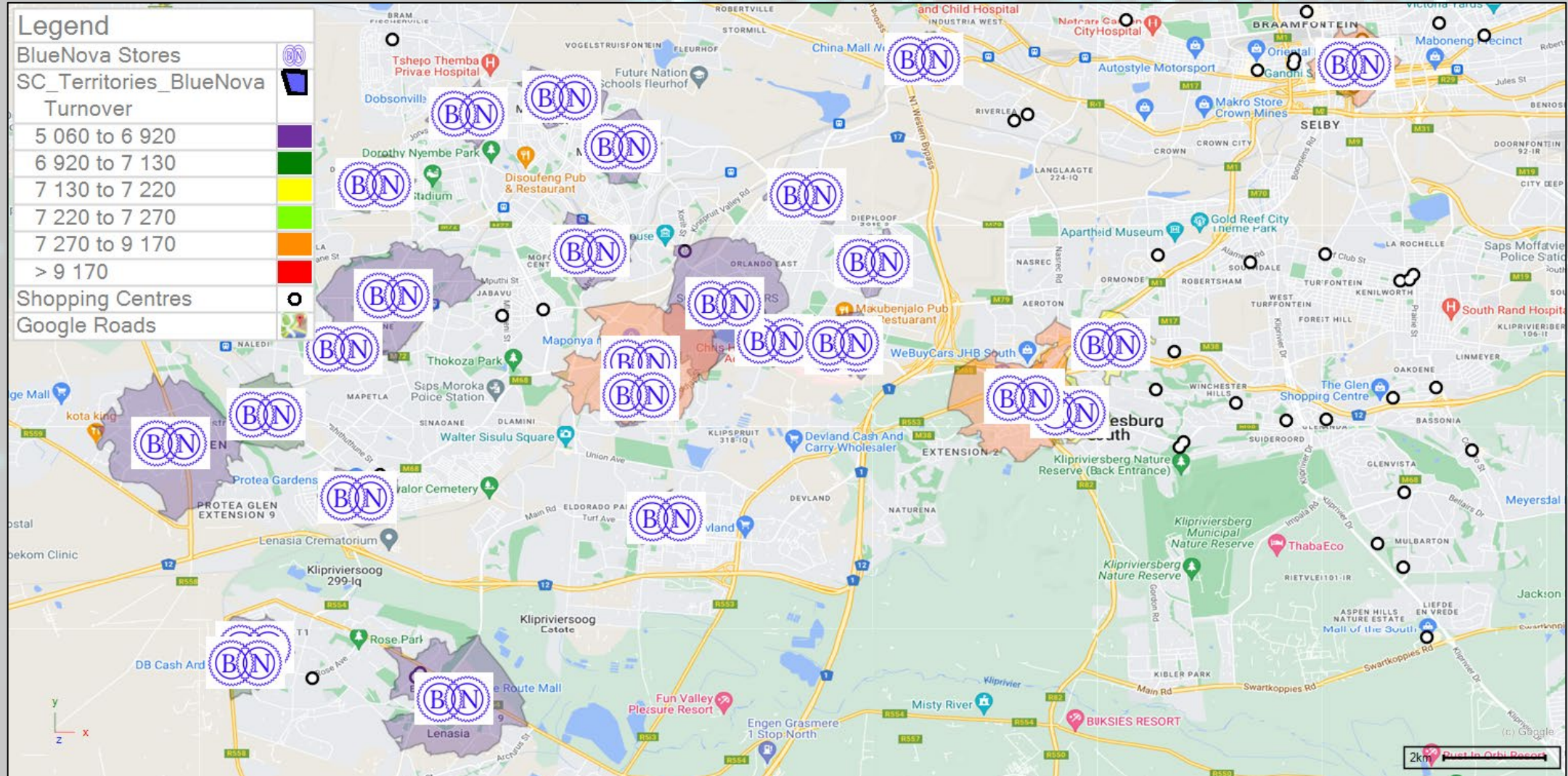
Layer Data: SC_Territories_BlueNova

	Competitor_Bound Care	Competitor_Glam Skin	Total_House Holds	House Hold_NLI1	House Hold_NLI2	House Hold_NLI3
0	1	0	4543.236229	235.6706918	121.7024171	
1	1	0	7336.693342	558.4619894	345.793441	
1	2	0	3563.028305	366.0940814	209.6979986	
0	1	0	10489.29419	6343.026988	1506.105467	
0	0	0	26216.14328	14491.62337	4174.731656	
0	0	0	3435.179093	564.4931989	188.2854079	
0	1	0	1146.198256	133.7877009	72.78211953	
0	1	0	5859.903215	491.4053807	286.0216065	
0	0	0	5491.162496	187.7772177	97.60904815	
1	0	0	22276.91405	9825.554125	3575.827964	
0	2	0	4998.641568	337.6723807	225.0479878	
1	0	0	16502.76436	2828.8192	1637.596415	
0	0	0	10474.39138	5892.891868	1885.863794	

Layer Data: SC_Territories_No_BlueNova

	AGE45_49_Sum	AGE50_54_Sum	AGE55_59_Sum	AGE60_64_Sum	AGE65_69_Sum	AGE70OVER_Sum	POP_KM2_Average	AREA_KM2
▶	8365.897007	7249.643575	6552.776196	6028.905705	5500.32858	7632.161975	4655.330378	
	9466.837423	7753.462001	6444.821498	4981.206391	4044.45229	5097.063515	6456.890759	
	240.6730307	194.6805488	221.651461	213.682821	245.4236251	214.4647618	1215.651278	
	685.9435279	606.1066975	537.2778575	460.9189399	427.7782662	687.9866701	1162.022514	
	887.4010082	786.3305102	765.2822361	780.8523958	597.2355807	844.7140443	3422.255606	
	1255.892898	1078.121097	1011.812603	1029.252618	854.8372705	1560.716519	5831.269345	
	134.551611	108.453387	118.349493	118.0470126	114.3077879	100.179488	488.7618924	
	3526.942171	1748.747907	1071.522022	530.4166934	206.2769327	307.7825525	36951.3361	
	204.9389038	158.9766698	187.4869162	179.1662373	205.8170745	181.2966226	1210.629617	
	726.4636899	617.7163805	560.0362415	677.1975955	707.6763953	1349.282422	2181.349043	
	451.5414556	532.2717916	541.805783	422.671747	387.4083298	999.1225391	738.6899157	
	337.2033539	246.2885579	184.279227	190.8640346	184.0735874	396.1255856	532.9260042	

Current Store Territories Themed on Turnover



Potential New Store Territories Themed on Predicted Turnover

