## Traffic Data Modelling

## Quick Overview

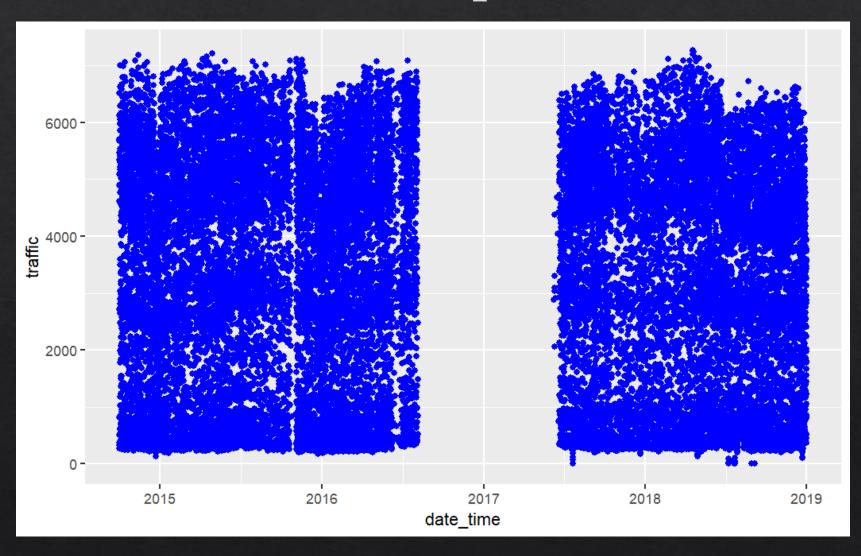
data tima	athar ganaral	oathor dotailad	alauda aayayaaa a	-t to war o watuwa	wa ina wa wa		+ no ff: o
date_time	weather_general	weather_detailed	clouds_coverage_po	ct temperature	rain_mm	snow_mm	tramc
01.10.2014 00:00	Clear	sky is clear	1	11.5	0	0	508
01.10.2014 01:00	Clear	sky is clear	1	10.3	0	0	323
01.10.2014 02:00	Clear	sky is clear	1	8	0	0	274
01.10.2014 03:00	Clear	sky is clear	1	7.9	0	0	372
01.10.2014 04:00	Clear	sky is clear	1	6.4	0	0	812
01.10.2014 05:00	Clear	sky is clear	1	5.5	0	0	2720

Day	1ev

•

		• Month					
date_time w	eather_general	• (Year)		ge_pct_temperature	rain_mm	snow_mm	traffic
01.10.2014 00:00	Clear	<ul> <li>Weekday</li> </ul>		11.5	0	0	508
01.10.2014 01:00	Clear	• Hour		10.3	0	0	323
01.10.2014 02:00	Clear	sky is clear	1	8	0	0	274
01.10.2014 03:00	Clear	sky is clear	1	7.9	0	0	372
01.10.2014 04:00	Clear	sky is clear	1	6.4	0	0	812
01.10.2014 05:00	Clear	sky is clear	1	5.5	0	0	2720
	01.10.2014 00:00 01.10.2014 01:00 01.10.2014 02:00 01.10.2014 03:00 01.10.2014 04:00	01.10.2014 00:00 Clear  01.10.2014 01:00 Clear  01.10.2014 02:00 Clear  01.10.2014 03:00 Clear  01.10.2014 04:00 Clear	date_time       weather_general       • (Year)         01.10.2014 00:00       Clear       • Weekday         01.10.2014 01:00       Clear       • Hour         01.10.2014 02:00       Clear       sky is clear         01.10.2014 03:00       Clear       sky is clear         01.10.2014 04:00       Clear       sky is clear         01.10.2014 04:00       Clear       sky is clear	date_time       weather_general       • (Year)         01.10.2014 00:00       Clear       • Weekday         01.10.2014 01:00       Clear       • Hour         01.10.2014 02:00       Clear       sky is clear       1         01.10.2014 03:00       Clear       sky is clear       1         01.10.2014 04:00       Clear       sky is clear       1	date_time         weather_general         • (Year)         ge_pct temperature           01.10.2014 00:00         Clear         • Weekday         11.5           01.10.2014 01:00         Clear         • Hour         10.3           01.10.2014 02:00         Clear         sky is clear         1         8           01.10.2014 03:00         Clear         sky is clear         1         7.9           01.10.2014 04:00         Clear         sky is clear         1         6.4	date_time         weather_general         • (Year)         ge_pct_temperature_rain_mm           01.10.2014 00:00         Clear         • Weekday         11.5         0           01.10.2014 01:00         Clear         • Hour         10.3         0           01.10.2014 02:00         Clear         sky is clear         1         8         0           01.10.2014 03:00         Clear         sky is clear         1         7.9         0           01.10.2014 04:00         Clear         sky is clear         1         6.4         0	date_time         weather_general         • (Year)         ge_pct_temperature_rain_mm_snow_mm           01.10.2014 00:00         Clear         • Weekday         11.5         0         0           01.10.2014 01:00         Clear         • Hour         10.3         0         0           01.10.2014 02:00         Clear         sky is clear         1         8         0         0           01.10.2014 03:00         Clear         sky is clear         1         7.9         0         0           01.10.2014 04:00         Clear         sky is clear         1         6.4         0         0

## Data Split





# Snow and Rain as Near Zero Variance

Exclude them?

### Select Model

	MSE	RMSE	MAE	MAPE	SMAPE	MedAE	MSLE	R2
traffic_lm1	979875.410446131	989.886564433588	667.925522180463	0.228083188537571	24.882987524907	425.47184935156	0.250192546939558	0.75299676536548
traffic_lm2	117598485.223746	10844.283527451	1857.50003420977	-1.24917750199369	85.6541337914026	1634.61770954113	NaN	0.0120050600698597
traffic_lm3	707991.849140989	841.422515232977	605.008184480452	0.327396620205148	35.3929693443638	453.063719584219	NaN	0.82131840172787
traffic_lm2_backward_AIC	559126610.632055	23645.8582130583	2077.50756901701	-0.416610116781009	80.8648369563351	1585.75197175168	NaN	0.0040049252198199
traffic_elastic	5573194.65021534	2360.76145559337	634.711606185892	-0.443094723610334	35.5087716680741	463.029072567359	NaN	0.319187870587195
traffic_train_knn5	2429758.46711345	1558.76825317731	1205.23620462457	0.46444851592986	48.7466695178766	946.6	0.714195736070102	0.388289637519163
traffic_train_knn145	3399197.097925	1843.6911612103	1596.3170299159	0.515387745254067	60.5996955970509	1595.44263925729	1.01511200023767	0.155528609305844
traffic_train_knn_tuned	2451212.84199117	1565.63496447645	1229.38010916306	0.459462816842685	49.6867074359619	1003.35714285714	0.731436847424512	0.381865233704617

#### Traffic ~ clouds, temperature, month, hour, weekday

	MSE							
traffic_lm1	979875.410446131	989.886564433588	667.925522180463	0.228083188537571	24.882987524907	425.47184935156	0.250192546939558	0.75299676536548
traffic_lm2	117598485.223746	10844.283527451	1857.50003420977	-1.24917750199369	85.6541337914026	1634.61770954113	NaN	0.0120050600698597
traffic_lm3	707991.849140989	841.422515232977	605.008184480452	0.327396620205148	35.3929693443638	453.063719584219	NaN	0.82131840172787
traffic_lm2_backward_AIC	559126610.632055	23645.8582130583	2077.50756901701	-0.416610116781009	80.8648369563351	1585.75197175168	NaN	0.0040049252198199
traffic_elastic	5573194.65021534	2360.76145559337	634.711606185892	-0.443094723610334	35.5087716680741	463.029072567359	NaN	0.319187870587195
traffic_train_knn5	2429758.46711345	1558.76825317731	1205.23620462457	0.46444851592986	48.7466695178766	946.6	0.714195736070102	0.388289637519163
traffic_train_knn145	3399197.097925	1843.6911612103	1596.3170299159	0.515387745254067	60.5996955970509	1595.44263925729	1.01511200023767	0.155528609305844
traffic_train_knn_tuned	2451212.84199117	1565.63496447645	1229.38010916306	0.459462816842685	49.6867074359619	1003.35714285714	0.731436847424512	0.381865233704617

### Expected MAPE

0.3273