

Project 169

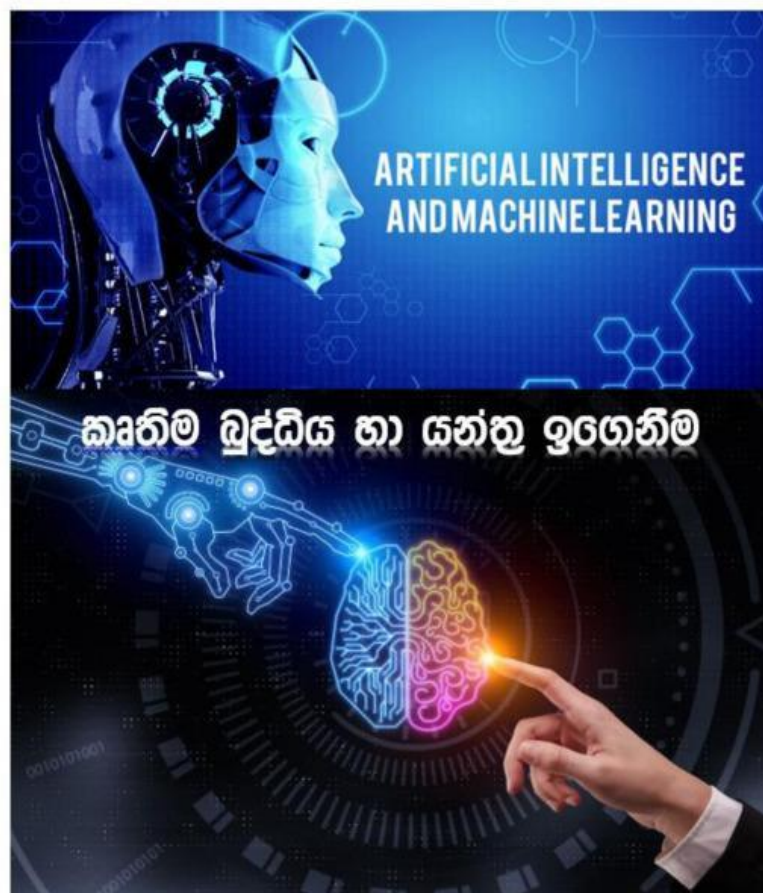
169 වන ව්‍යාපෘතිය



Coding School

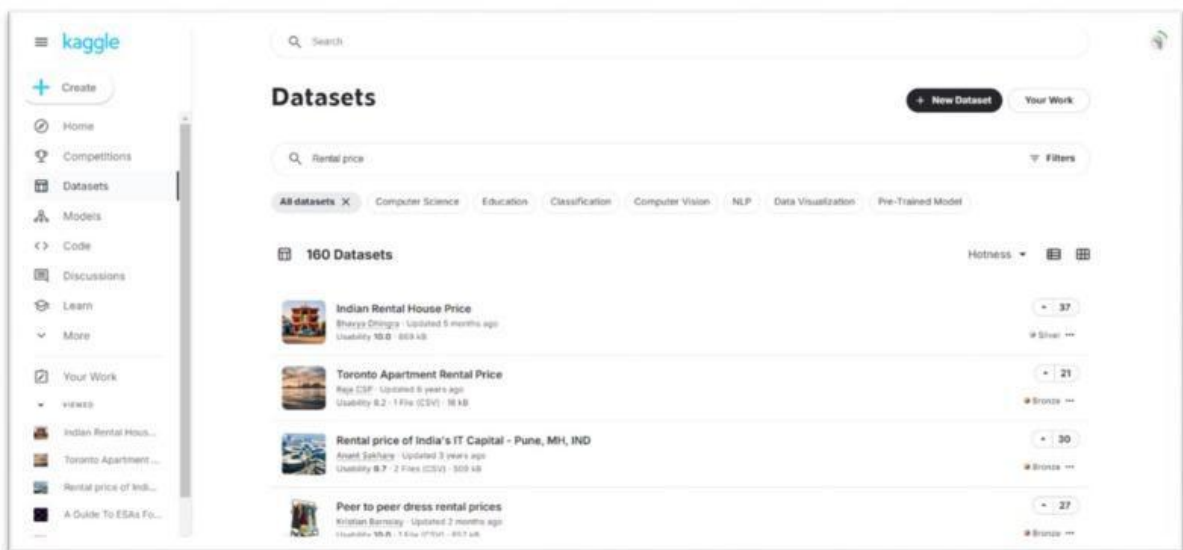


AI and Machine Learning

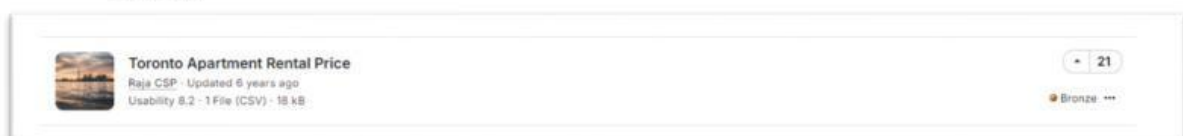


ආරම්භ කරන්න

- ❖ මෙම homework එකේදී kaggle website එකේ ඇති dataset එකක් භාවිතා කර machine learning model එකක් train කර එම model එක භාවිතා කර App lab එක මගින් mobile app එකක් නිර්මාණය කරමු.
- ❖ මෙහිදී නිවාස වල හෝ apartment වල rental price එක calculate කිරීමට app එකක් නිර්මාණය කරමු.
- ❖ ප්‍රථමයෙන් ඔබගේ kaggle website account එකට log වන්න.
- ❖ දැන් side bar එකේ ඇති Datasets tab එක click කරන්න.
- ❖ Rental price ලෙස search කරන්න.



- ❖ ඒ අතරින් Toronto Apartment Rental Price ලෙස ඇති dataset එක select කර ගන්න.



- ❖ Download මත click කර එම dataset එක download කර dataset එක extract කර ගන්න.



RAAJA CSP · UPDATED 6 YEARS AGO

21

New Notebook

Download (18 kB)



Toronto Apartment Rental Price

Apartment Rental price list - Toronoto



Data Card

Code (4)

Discussion (0)

Suggestions (0)

About Dataset

Context

I have collected the Toronto Apartment Rental prices from various sources in local websites.

Content

There are 7 columns in the dataset.

Bedroom - How many bedrooms available

Bathroom - How many bathrooms available

Den - Whether den is available or not

Address - Location

Usability

8.24

License

CC0: Public Domain

Expected update frequency

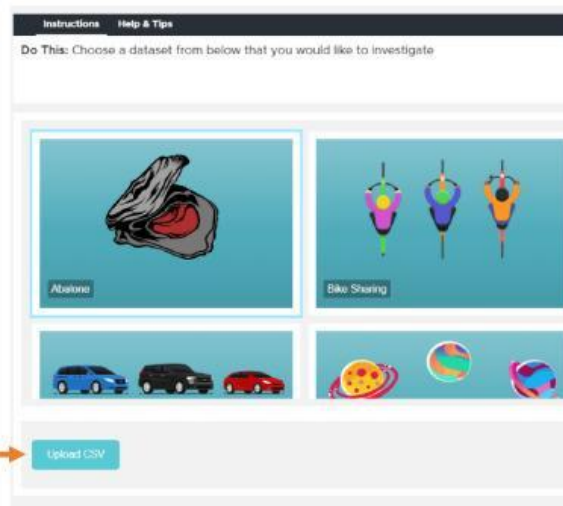
Quarterly

Tags

Business

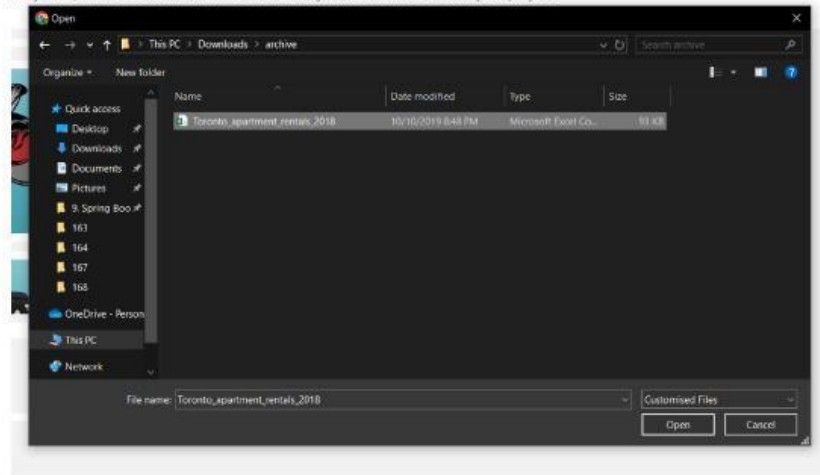
Internet

- ❖ දැන් home work එකේ ඇති ආරම්භ කරන්න button එක මත click කර AI and machine learning lab එක open කර ගන්න.
- ❖ Upload CSV button එක මත click කර download කරන ලද Toronto_apartment_rentals_2018 යන dataset එක AI and machine learning lab එකට upload කර ගන්න.



Upload CSV button එක මත click කරන්න.

urvey data, or choose from a dataset below that you would like to use for your project.



- ❖ එම data set එකේ rows 1124 ක් ඇත.
- ❖ දැන් Continue button එක මත click කරන්න.
- ❖ මෙහිදී සිදුකරන්නේ apartment වල rental price එක predict කිරීම සඳහා app එකක් නිර්මාණය කිරීමය.
- ❖ Rental price එක predict කිරීමට නම් select කළයුතු වන්නේ price column එක වේ.
- ❖ නමුත් මෙහිදී price column එක select කළ නොහැක.

Predict based on

Bedroom	Bathroom	Den	Address	Lat	Long	Price
2	2	0	1085 Grand Park Drive, 1085 Grand Park Dr, Mississauga, ON L5B 0A8, Canada	43.5616381	-79.6481193	\$2,450.00
1	1	1	361 Front St W, Toronto, ON M5V 3R5, Canada	43.6430505	-79.3916429	\$2,150.00
1	1	0	89 McCall Street, Toronto, ON, M5B 0B1	43.6000054	-79.3793354	\$1,950.00
2	2	0	10 York Street, Toronto, ON, M5J 0E1	43.6410868	-79.3814048	\$2,900.00
1	1	0	80 St Patrick St, Toronto, ON M5T 2X5, Canada	43.6524873	-79.3896218	\$1,800.00
1	1	0	87 Jameson Avenue, Toronto, ON, M9K 2W9	43.6348903	-79.4349541	\$1,720.00
2	1	0	700 Ross Street, Burlington, ON, L7S 1S2	43.3289855	-79.8086183	\$1,680.00
1	1	0	25 Telegram Mews, Toronto, ON, M5V 3Z2	43.6409179	-79.3839821	\$1,500.00
1	1	0	560 Front St W, Toronto, ON, M5V 0L9	43.6413078	-79.4000933	\$1,900.00
1	1	1	70 Queens Wharf Rd 3rd Floor, Toronto, ON M5V 0J2, Canada	43.6400685	-79.3999604	\$2,400.00
1	1	0	545 - 555 Sherbourne Street, Toronto, ON, M4X 1W5	43.6894879	-79.3748338	\$1,750.00
2	1	0	545 - 555 Sherbourne Street, Toronto, ON, M4X 1W5	43.6894879	-79.3748338	\$2,000.00

There are 1124 rows of data. (Showing first 100 rows)

Price

Data Type
categorical

Column Information
188 values were found in this column. A graph is only shown when there are 5 or fewer.

Note
Categorical columns with more than 50 unique values can not be selected as the label or a feature.

- ❖ මෙහිදී price column එක select කළ නොහැකි වන්නේ \$ symbol එකක් සමඟ price column එකේ values ඇති බැවිනි. එමනිසා AI lab එකට price column එකේ ඇති values number ලෙස හඳුනා ගැනීමට නොහැක.

- ❖ Toronto_apartment_rentals_2018 යන dataset එක excel මගින් open කර ගන්න.

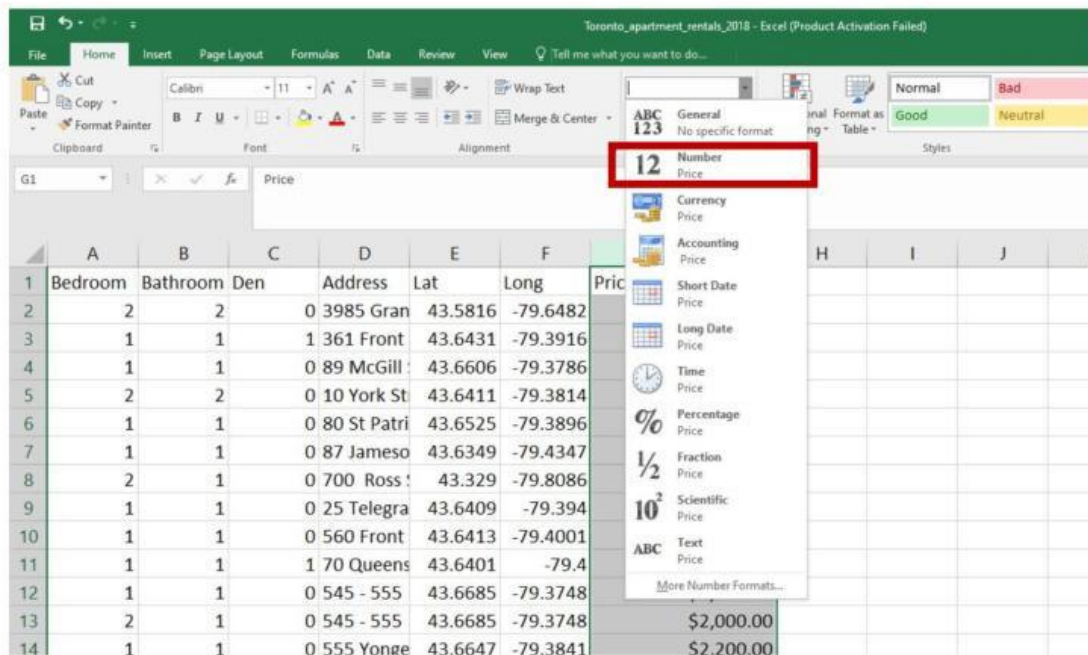
	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R
1	Bedroom	Bathroom	Den	Address	Lat	Long	Price											
2	2	2	0	3985 Gran	43.58164	-79.6482	\$2,450.00											
3	1	1	1	361 Front	43.64305	-79.3916	\$2,150.00											
4	1	1	0	89 McGill	43.66061	-79.3786	\$1,950.00											
5	2	2	0	10 York St	43.64109	-79.3814	\$2,900.00											
6	1	1	0	80 St Patri	43.65249	-79.3896	\$1,800.00											
7	1	1	0	87 Jamesc	43.63489	-79.4347	\$1,729.00											
8	2	1	0	700 Ross	43.32899	-79.8086	\$1,685.00											
9	1	1	0	25 Telegra	43.64092	-79.394	\$1,900.00											
10	1	1	0	560 Front	43.64131	-79.4001	\$1,900.00											
11	1	1	1	70 Queen	43.64007	-79.4	\$2,400.00											
12	1	1	0	545 - 555	43.66847	-79.3748	\$1,750.00											
13	2	1	0	545 - 555	43.66847	-79.3748	\$2,000.00											
14	1	1	0	555 Yonge	43.66472	-79.3841	\$2,200.00											
15	1	1	1	M5J, Cana	43.64082	-79.3818	\$2,350.00											
16	1	1	0	295 Adela	43.64763	-79.3904	\$2,650.00											
17	1	1	0	191 - 201	43.65674	-79.37	\$1,799.00											
18	1	1	0	191 - 201	43.65674	-79.37	\$1,899.00											
19	1	1	0	89 McGill	43.66061	-79.3786	\$1,950.00											
20	2	2	0	3985 Gran	43.58164	-79.6482	\$2,450.00											
21	2	2	0	11 Brunel	43.63941	-79.3932	\$3,150.00											
22	2	2	0	12 Yonge	43.64311	-79.3759	\$3,200.00											
23	1	1	0	438 Richm	43.64801	-79.3968	\$2,500.00											
24	1	1	1	12 York St	43.64187	-79.3819	\$2,400.00											
25	1	1	0	7934 Kipli	43.78319	-79.5986	\$1,750.00											
26	2	2	0	York St, Tc	43.64231	-79.3812	\$3,100.00											
27	2	2	0	10 Park La	43.62329	-79.4837	\$2,999.00											
28	1	1	0	, Toronto	43.75989	-79.4431	\$1,250.00											
29	1	1	0	33 Gamble	43.68936	-79.3528	\$1,825.00											

- ❖ දැන් g column එක මත click කර home tab එකට යන්න.

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
1	Bedroom	Bathroom	Den	Address	Lat	Long	Price									
2	2	2	0	3985 Gran	43.58164	-79.6482	\$2,450.00									
3	1	1	1	361 Front	43.64305	-79.3916	\$2,150.00									
4	1	1	0	89 McGill	43.66061	-79.3786	\$1,950.00									
5	2	2	0	10 York St	43.64109	-79.3814	\$2,900.00									
6	1	1	0	80 St Patri	43.65249	-79.3896	\$1,800.00									
7	1	1	0	87 Jamesc	43.63489	-79.4347	\$1,729.00									
8	2	1	0	700 Ross	43.32899	-79.8086	\$1,685.00									
9	1	1	0	25 Telegra	43.64092	-79.394	\$1,900.00									
10	1	1	0	560 Front	43.64131	-79.4001	\$1,900.00									
11	1	1	1	70 Queen	43.64007	-79.4	\$2,400.00									
12	1	1	0	545 - 555	43.66847	-79.3748	\$1,750.00									
13	2	1	0	545 - 555	43.66847	-79.3748	\$2,000.00									
14	1	1	0	555 Yonge	43.66472	-79.3841	\$2,200.00									
15	1	1	1	M5J, Cana	43.64082	-79.3818	\$2,350.00									
16	1	1	0	295 Adela	43.64763	-79.3904	\$2,650.00									

- ❖ දැන් ඉහත රතු පාට කොටුව තුළ ඇති drop down එක මත click කරන්න.

❖ එම drop down එකෙන් Number යන්න select කර ගන්න.



❖ එවිට price column එකේ \$ symbol එක ඉවත් වේ. දැන් මෙම excel file එක save කර ගන්න.

	A	B	C	D	E	F	G	H
1	Bedroom	Bathroom	Den	Address	Lat	Long	Price	
2	2	2	0	3985 Gran	43.5816	-79.648	2450.00	
3	1	1	1	361 Front	43.6431	-79.392	2150.00	
4	1	1	0	89 McGill	43.6606	-79.379	1950.00	
5	2	2	0	10 York St	43.6411	-79.381	2900.00	
6	1	1	0	80 St Patri	43.6525	-79.39	1800.00	
7	1	1	0	87 Jameso	43.6349	-79.435	1729.00	
8	2	1	0	700 Ross	43.329	-79.809	1685.00	
9	1	1	0	25 Telegra	43.6409	-79.394	1900.00	
10	1	1	0	560 Front	43.6413	-79.4	1900.00	
11	1	1	1	70 Queens	43.6401	-79.4	2400.00	
12	1	1	0	545 - 555	43.6685	-79.375	1750.00	
13	2	1	0	545 - 555	43.6685	-79.375	2000.00	
14	1	1	0	555 Yonge	43.6647	-79.384	2200.00	
15	1	1	1	M5J, Cana	43.6408	-79.382	2350.00	
16	1	1	0	295 Adela	43.6476	-79.39	2650.00	
17	1	1	0	191 - 201	43.6567	-79.37	1799.00	
18	1	1	0	191 - 201	43.6567	-79.37	1899.00	

- ❖ දැන් save කර ගත් dataset එක AI and machine learning lab එකට upload කර ගන්න.
- ❖ Continue button එක මත click කරන්න.
- ❖ දැන් Rental price එක predict කිරීම සඳහා price column එක select කළ හැකි වේ.

Predict Price based on Bedroom

Bedroom	Bathroom	Den	Address	Lat	Long	Price
2	2	0	3985 Grand Park Drive, 3985 Grand Park Dr, Mississauga, ON L5B 0H8, Canada	43.5816391	-79.648193	2450.00
1	1	1	361 Front St W, Toronto, ON M5V 3R5, Canada	43.6430505	-79.3916429	2150.00
1	1	0	89 McGill Street, Toronto, ON, M5B 0B1	43.6606054	-79.3786354	1950.00
2	2	0	10 York Street, Toronto, ON, M5J 0E1	43.6410868	-79.3814048	2900.00
1	1	0	80 St Patrick St, Toronto, ON M5T 2X6, Canada	43.6524873	-79.3896218	1800.00
1	1	0	87 Jameson Avenue, Toronto, ON, M6K 2W8	43.6348903	-79.4346541	1729.00
2	1	0	700 Ross Street, Burlington, ON, L7S 1S2	43.3289855	-79.8086183	1685.00
1	1	0	25 Telegram Mews, Toronto, ON, M5V 3Z2	43.6409179	-79.3939821	1900.00
1	1	0	560 Front St W, Toronto, ON, M5V 0L5	43.6413078	-79.4000933	1900.00
1	1	1	70 Queens Wharf Rd 33rd Floor, Toronto, ON M5V 0J2, Canada	43.6400685	-79.3999604	2400.00
1	1	0	545 - 555 Sherbourne Street, Toronto, ON, M4X 1W5	43.6684679	-79.3748336	1750.00
2	1	0	545 - 555 Sherbourne Street, Toronto, ON, M4X 1W5	43.6684679	-79.3748336	2000.00

There are 1124 rows of data. (Showing first 100 rows)

Price

Data Type
numerical

Column information
min 65
max 535000
range 534935

Select label

- ❖ දැන් continue button එක මත click කරන්න.
- ❖ දැන් base on සඳහා column select කර ගන්න.

Predict Price based on Bedroom, Bathroom, Den, Lat, Long

Bedroom	Bathroom	Den	Address	Lat	Long	Price
2	2	0	3985 Grand Park Drive, 3985 Grand Park Dr, Mississauga, ON L5B 0H8, Canada	43.5816391	-79.648193	2450.00
1	1	1	361 Front St W, Toronto, ON M5V 3R5, Canada	43.6430505	-79.3916429	2150.00
1	1	0	89 McGill Street, Toronto, ON, M5B 0B1	43.6606054	-79.3786354	1950.00
2	2	0	10 York Street, Toronto, ON, M5J 0E1	43.6410868	-79.3814048	2900.00
1	1	0	80 St Patrick St, Toronto, ON M5T 2X6, Canada	43.6524873	-79.3896218	1800.00
1	1	0	87 Jameson Avenue, Toronto, ON, M6K 2W8	43.6348903	-79.4346541	1729.00
2	1	0	700 Ross Street, Burlington, ON, L7S 1S2	43.3289855	-79.8086183	1685.00
1	1	0	25 Telegram Mews, Toronto, ON, M5V 3Z2	43.6409179	-79.3939821	1900.00
1	1	0	560 Front St W, Toronto, ON, M5V 0L5	43.6413078	-79.4000933	1900.00
1	1	1	70 Queens Wharf Rd 33rd Floor, Toronto, ON M5V 0J2, Canada	43.6400685	-79.3999604	2400.00
1	1	0	545 - 555 Sherbourne Street, Toronto, ON, M4X 1W5	43.6684679	-79.3748336	1750.00
2	1	0	545 - 555 Sherbourne Street, Toronto, ON, M4X 1W5	43.6684679	-79.3748336	2000.00

There are 1124 rows of data. (Showing first 100 rows)

- ❖ දැන් train මත click කරන්න.
- ❖ එවිට Apartment එකෙහි නිදහස් කාමර ගණන, නාන කාමර ගණන, ගබඩා කාමර ගණන හා location අනුව rent price predict කළ විට 98.23% ක හොඳ අගයක accuracy එකක් ලැබිණි.

Result

Accuracy

Predict **Price** based on **Bedroom**, **Bathroom**, **Den**, **Lat**, **Long**

98.23%

[Details](#)

Try it out!

Bedroom

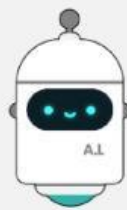
Bathroom

Den

Lat

Long

Predict



A.I. predicts

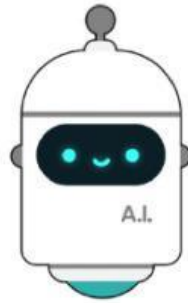
Price
4000

- ❖ දැන් model එක save කර ගනිමු.
- ❖ දැන් continue button එක මත click කරන්න.
- ❖ Model එකේ නම සඳහා apartmentRentPriceModel ලබා දෙන්න.

Predict **Price** based on **Bedroom**, **Bathroom**, **Den**, **Lat**, **Long**

Model name (required)

- ❖ දැන් save button එක මත click කරන්න.
- ❖ එවිට අප නිර්මාණය කරන ලද model එකේ details පහත ආකාරයට display වේ.
- ❖ අප නිර්මාණය කරන ලද model එකේ details පහත ආකාරයට display වේ.



apartmentRentPriceModel	
Accuracy	98.23%
Intended Use	
Limitations and Warnings	
About the Data	Dataset size 1124 rows
Features and Label	Predict Price based on Bedroom, Bathroom, Den, Lat, Long
Label	Price Possible Values min 65 max 535000
Features	Bedroom Possible Values min 1 max 3 Bathroom

- ❖ දැන් Finish button එක මත click කරන්න.