



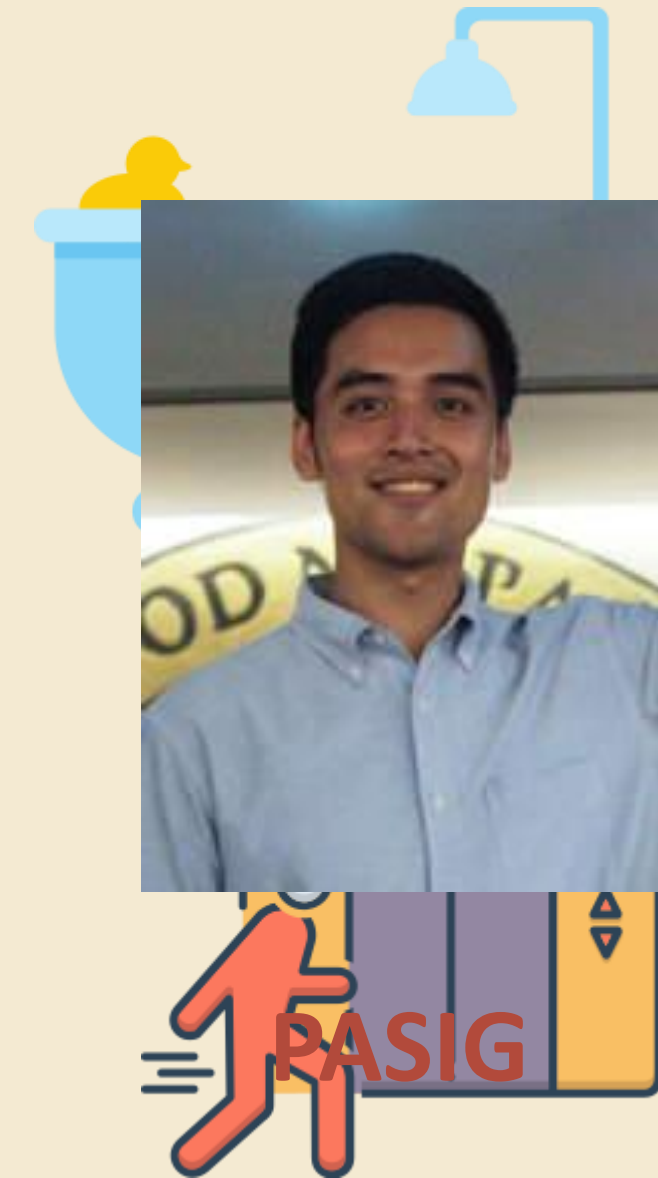
A low-angle, black and white photograph of several modern skyscrapers reaching towards a cloudy sky. The perspective is from the ground looking up, creating a sense of height and scale. The buildings have glass facades and structural details visible. A red rectangular banner is positioned at the top center of the image.

MACHINE LEARNING 1

Predicting Residential Condominium Prices based on the features on Lamudi.com

By: Ralph Caubalejo

Why Condo?



**Can we predict condominium prices
based on its features/location?**

Lamudi.com

An Online Real Estate Marketplace


- Expanded in Philippines in 2014
- 6.6 Million Monthly Pageviews
- 140,000 Monthly Leads
- Currently Operates in 34 Countries

Ugong (Area in Pasig) Buy Rent New Development Resources

> Home > Region: Metro Manila > City: Pasig > Area: Ugong > Studio Unit (1822) for Sale in Maple at Verdant Towers, Ortigas, Pasig City

Studio Unit (1822) for Sale in Maple at Verdant Towers, Ortigas, Pasig City

Ortigas East Ugong, Pasig



4 Map

₱ 7,969,000

1 Bedrooms 1 Baths 34 m²

Overview Amenities Location

DETAILS

Bedrooms	1	Condominium Name	Maple at Verdant Towers
Baths	1	Price range	7.1M - 9.6M
Floor area (m²)	34	Sqm Range	31 - 35 sqm
Unit/Floor Number	1822		

Ortigas Land
+63995
Show Phone Number

Ortigas Land
Visit Developer page

Ask about the property

First Name* Surname*

+63 Phone Number*

Email

Contact Seller

By clicking Contact Seller, you are accepting Lamudi's Terms and Condition and Privacy Policy page.

Dataset

**6,521 Unique Residential
Condominium Listings**

Preprocessing

- a) Drop Null Values
- b) Drop Anomalous Rows
- c) No Scaling

FEATURES

1. City
2. No. of Bedrooms
3. No. of Bathrooms
4. Floor Area
5. No. of Amenities
6. Latitude Coordinate
7. Longitude Coordinate
8. Floor Number
9. Price/Amount - Target



ML Models

Fitting the Data to the applicable models

ML MODEL W/ Optimized Parameters	Train Accuracy (R2 Score)	Test Accuracy (R2 Score)	MAE (in millions)	RMSE (in millions)
Linear	62.25 %	63.05 %	2.45	3.55
KNN	69.40 %	64.54 %	2.32	3.52
Decision Tree	83.52 %	75.58 %	1.78	2.87
Random Forest	89.99 %	83.34 %	1.53	2.20
Gradient Boosting	93.73 %	85.31 %	1.42	2.17
Extra Trees	90.44 %	83.14 %	1.58	2.21
XGB	90.56 %	84.45 %	1.48	2.24
Lightboost	90.79 %	84.93 %	1.44	2.24
Catboost	89.02%	84.00 %	1.51	2.22

ML Models

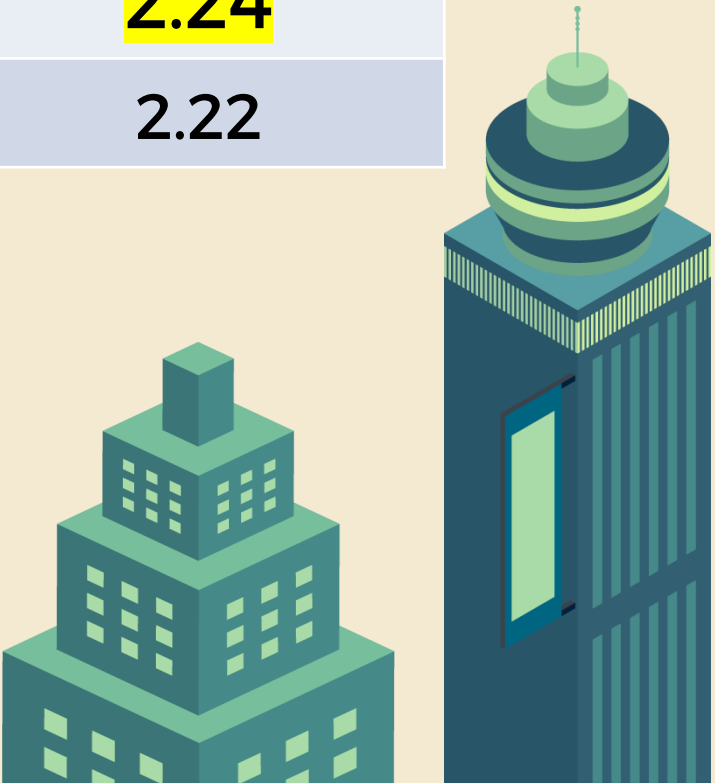
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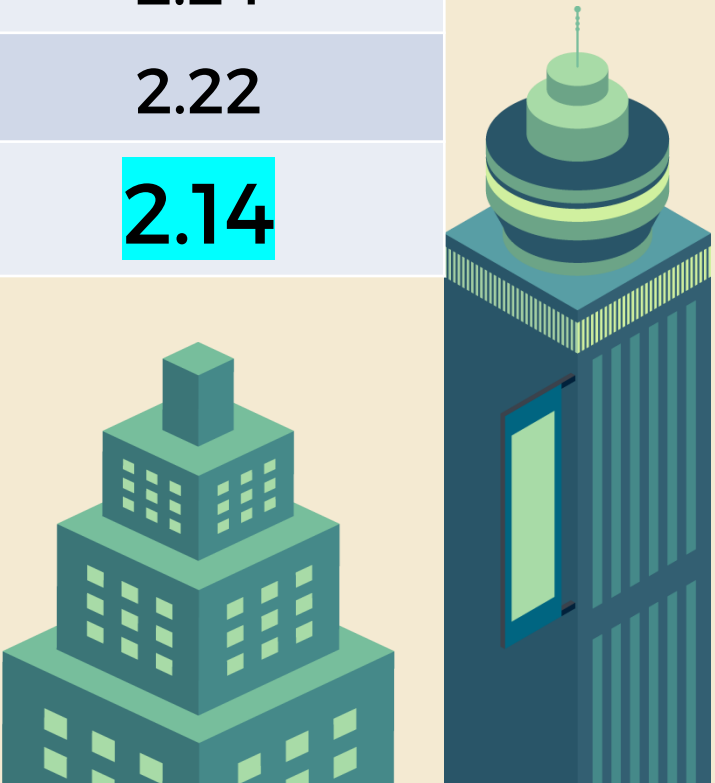


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Voting	92.58 %	85.46 %	1.41	2.14

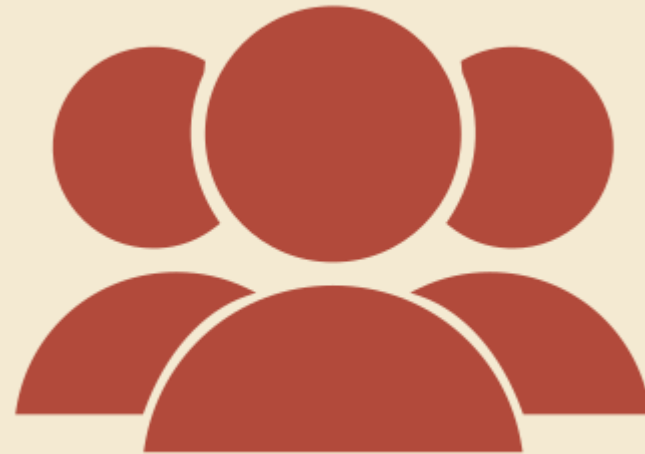
85.46%
Voting Regressor Method
Using GBM and LB as the Base Estimators



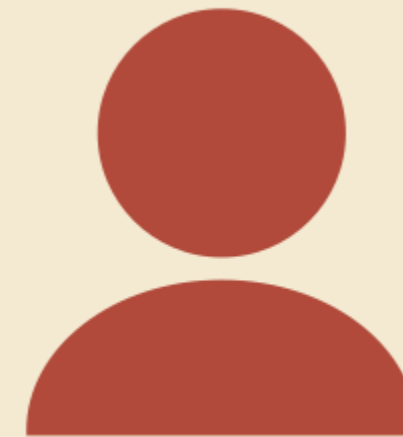
Who can benefit from this model?



Real Estate
Companies



Real Estate
Agents



Buyers

Thank you

**“Love is Patient, Love is Kind,
It always protects, trusts, hopes and perseveres”
1 Corinthians 13: 4-8a,NIV**

