Purwadhika Project

Jonathan Hadipratama

HELLO!

I am Jonathan Hadipratama

I am here because I love data and I will present you all about myself and my progress in Purwadhika
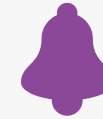
1. A bit about myself

My Background

Background

Graduated from Institut Teknologi Bandung with a Bachelor of Engineering Title and have 3.55/4.00 GPA.

Previous Experience

I was a geologist in Amman Mineral Nusa Tenggara and Pertamina Hulu Energi which highly related to geological data.

Organizational and committee

Active in various program in diverse scale, from university, regional, national and international.

2. My Project in Purwadhika

Highlight to my projects

Airbnb Singapore

Rossman Store Sales

Give me some credit

Highlight to my projects

Project	Machine learning model	Objective	Remarks
Airbnb Singapore	Regressor, Recommendation system, Sentiment, Unsupervised clustering	Predict the property's price and build recommendation system using clustering and text analysis.	Final Project
Rossman Store Sales	Regressor	Predict store's sales	deepen my knowledge about SQL
Give me some credit	Classification	Predict the status of the applicant in the next 2 year, whether this person will default or not.	learn about classification

Airbnb Singapore

Objective

Airbnb such a huge platform for hotel in the International market. With this project, my purpose is to increase the customer's satistification while using Airbnb Singapore by help them more option based on the hotel's property and suggest the reasonable normal price for the properties

Method

Using unsupervised machine learning, specifically **K-Means** to generate new feature, clustering. This feature is used for data cleansing, price prediction, and recommendation system

Utilizing many types of **regressor** to predict the property's price and maximizing the best model

Using **two layers** recommendation system to produce the final model for the recommendation. The first layer is **clustering** itself and the second layer is the **similarity** between two hotels based on their **text** in title and summary.

Rossman Store Sales

Objective

Sales is such an important thing for the store. Through deep analysis in sales, the store's owner can evaluate the past sales and learn from it. Moreover, using regressor model to predict future sales, the owner can set the strategy to face the future.

Method

for data preparation and data cleansing, mostly I process it in MySQL. Technically, it's not necessary using MySQL to process this data set since the data isn't too big and only consists of two tables. But my purpose in using MySQL is to deepen my skill because SQL is a powerful tool for data science.

for sales prediction, I decompose the date-time data and use it as a parameter to predict the future sales using regressor model

Give Me Some Credit

Objective

Nowadays, many institutions provide a loan for society and many people interested to use that facility. That is good news for those institutions because they can get more interest from the borrower. But, hold your horses! Are you sure those applicants can pay it well? The institution also needs to be careful to choose their credit recipient. Failed to choose good credit recipient means a bigger tendency of those people to become default and inflict loss for the company.

Method

The data is contain imbalance dataset. The non-default case is much more than the default case to tackle this problem, SMOTE is used.

For the data cleaning, I have tried many ways and combine it with many kinds of classification models. After getting the best combination, I optimizing the best model using bayesian optimization and generate the final model.

" Thank you for your attention. Hopefully we can work together in future