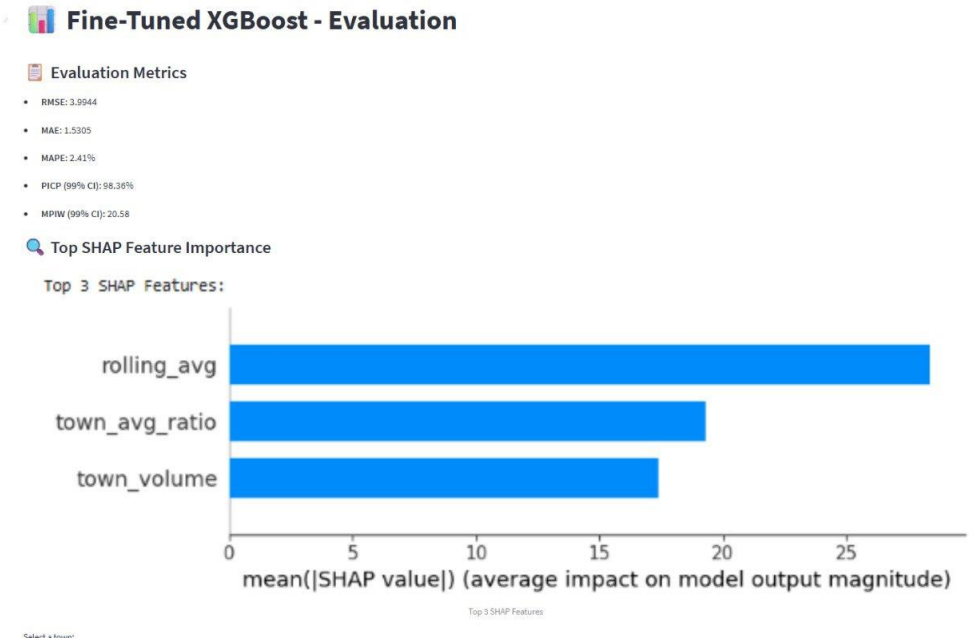
Meeting Minutes – 2 July 2025

Demand Forecasting



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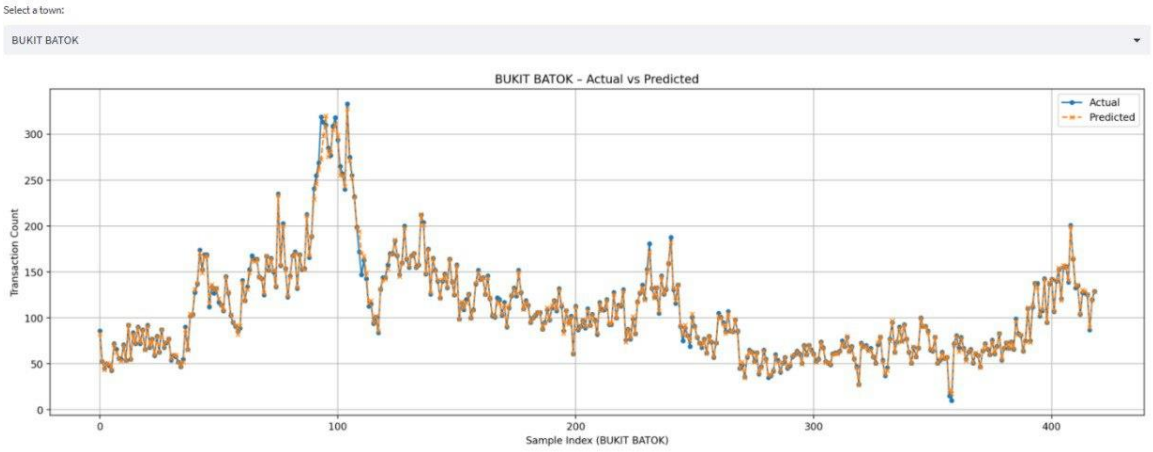
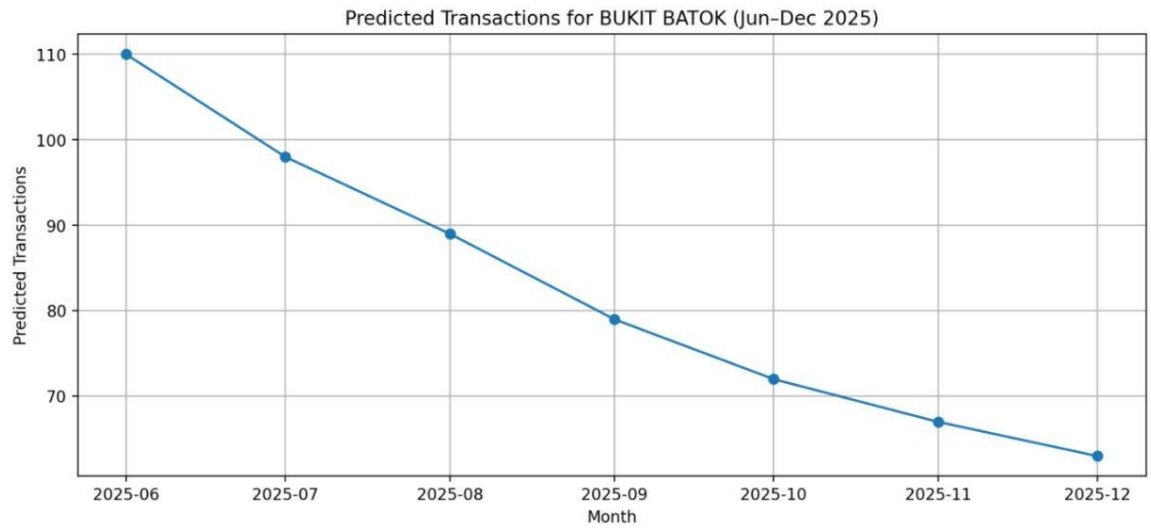
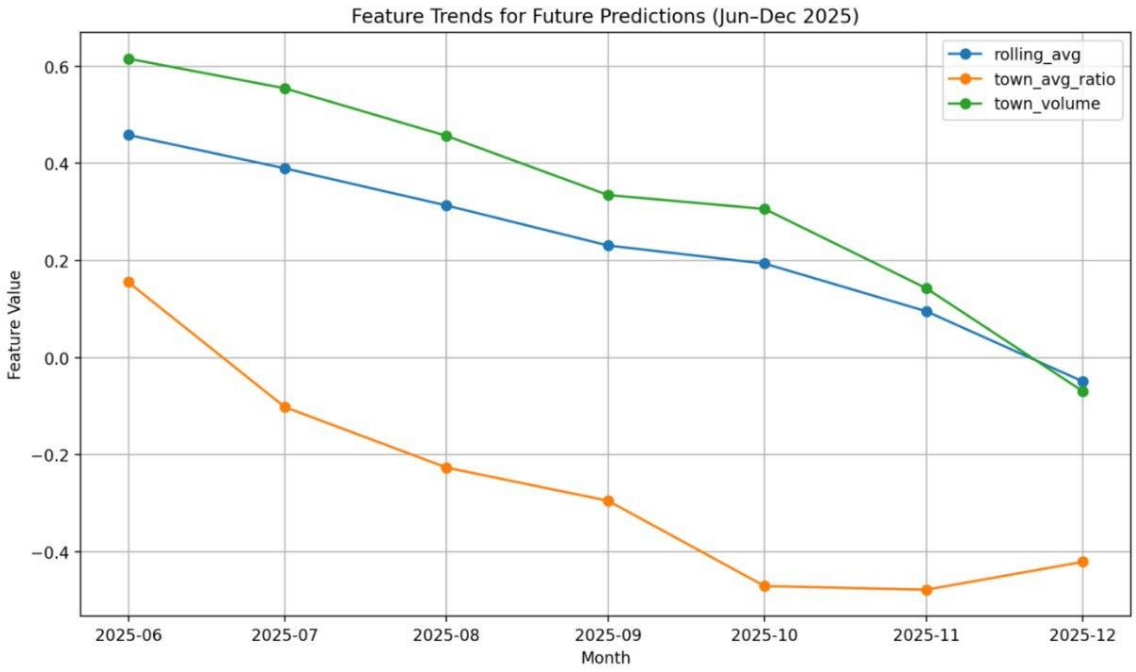


📈 Future Predictions (June–Dec 2025)





- fine tuned model working on AWS ECS

- plot future predictions (June- Dec)

- plot feature graph to see how it affect future predictions

Feedback

- add more filters like months

Market Trend Analysis

- Tried to further improve model by using hyperparameter tuning (Randomized Search) → previously manually edited hyperparameters
- Found best parameters for model to be:

```
model = XGBRegressor(
    n_estimators=1337,
    learning_rate=0.0521,
    max_depth=9,
    subsample=0.6830,
    colsample_bytree=0.9324,
    gamma=0.0602,
    reg_lambda=0.9637,
    reg_alpha=0.4059,
    random_state=42
    )
```

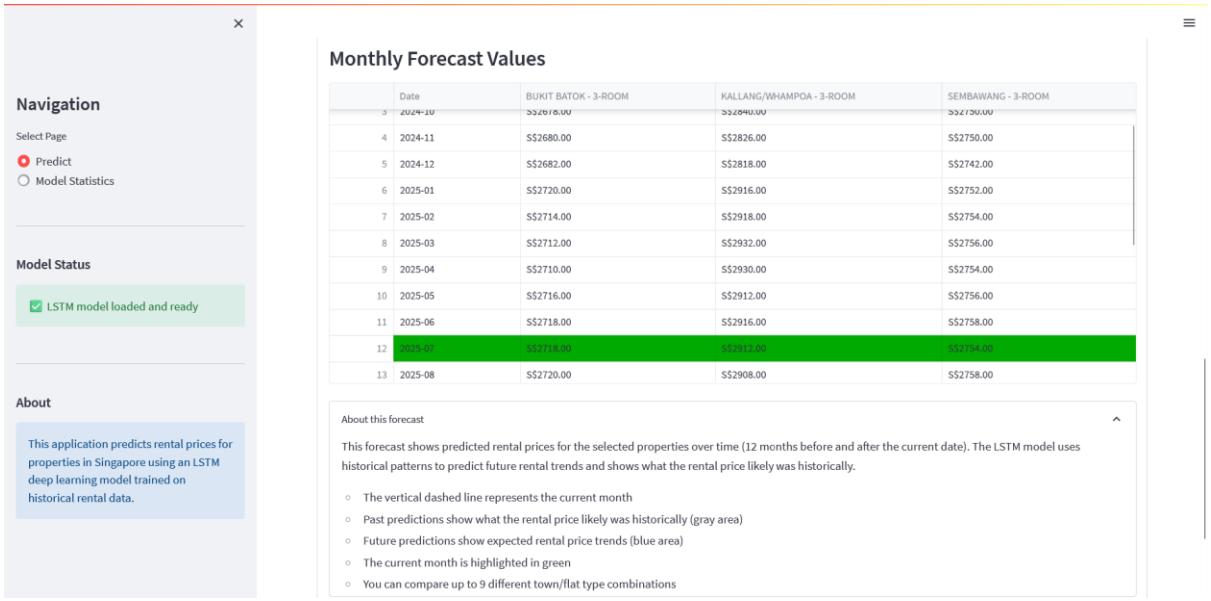
- Tried to further improve dataset and model accuracy using CleanLab (data-centric AI package that automatically finds and fixes errors in any ML dataset) → still WIP, not done yet

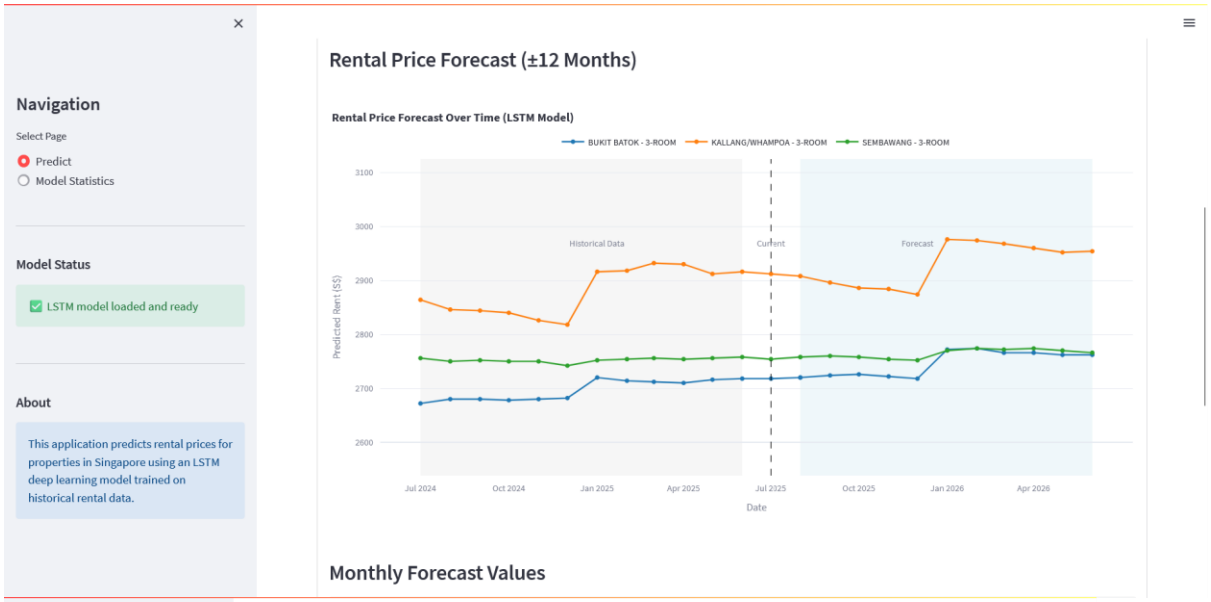
  Cleanlab is a Python library that helps you clean and improve your dataset by:

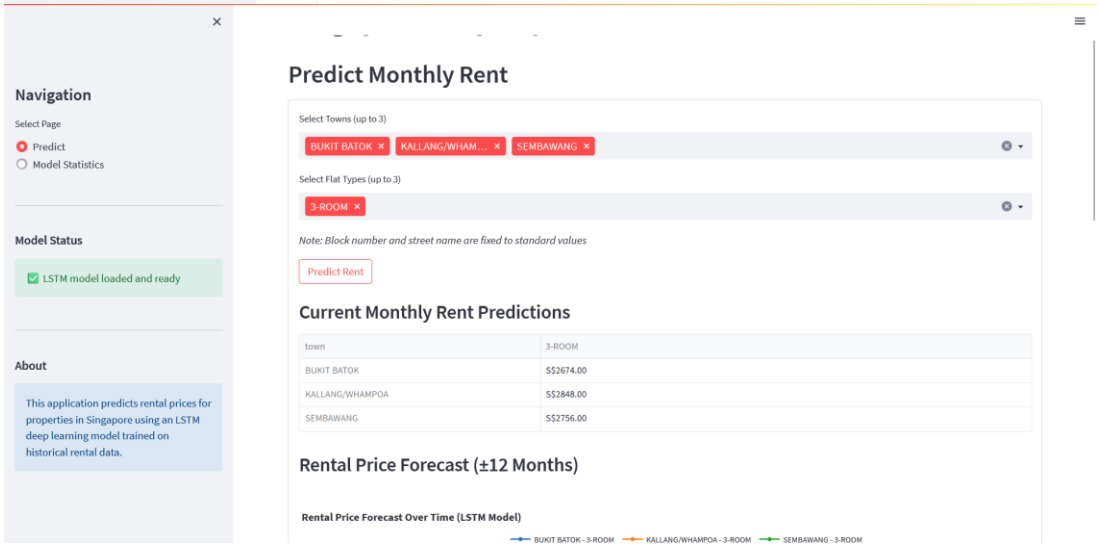
  - **Finding incorrect or messy labels** in your data (e.g. a dog image labeled as "cat").
  - **Estimating how confident your model is** about each label.
  - **Letting you filter or fix bad data** so your machine learning model becomes more accurate.

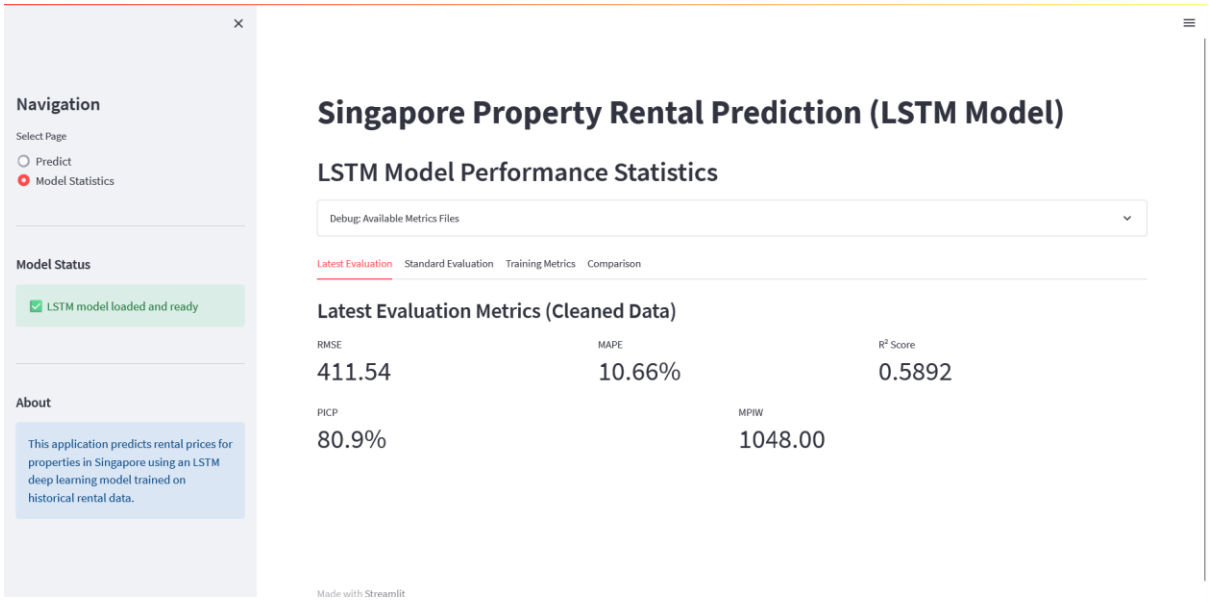
- Uploaded new image to AWS to check for any crashes (http://54.254.121.48:8501/)

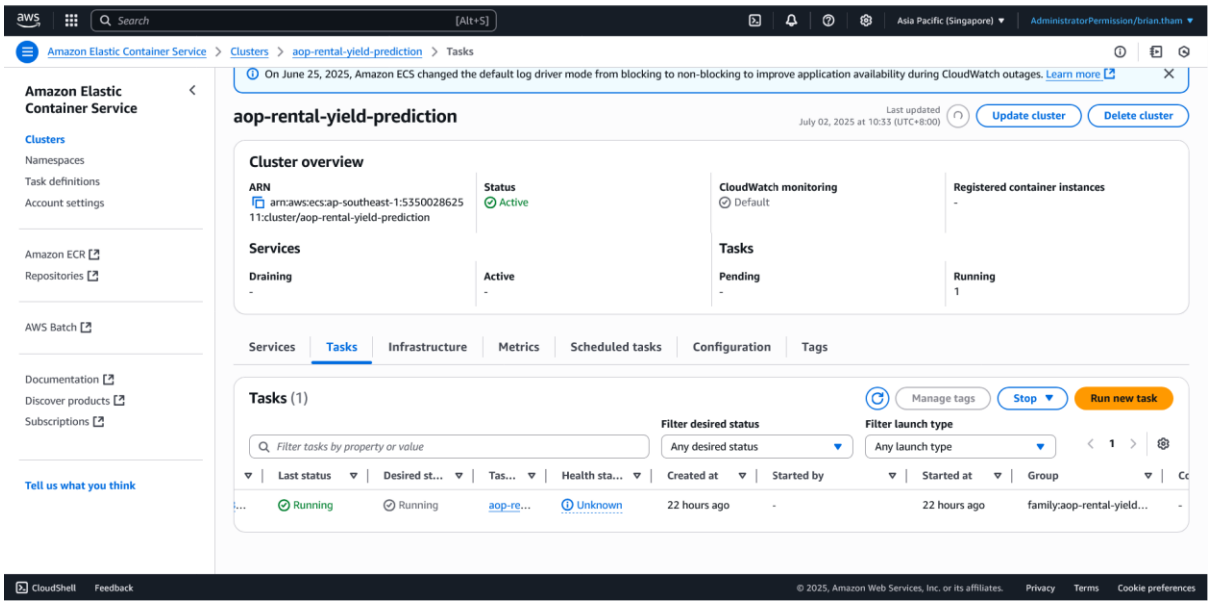
Rental Yield Prediction











Feedback

- To find a tool that can develop something similar to SHAP summary

Predictive Price Analytics

- Made the graph less drastic
- Uploaded image onto AWS

Team TO-DO

1. Schedule presentation date and time with Prof Wendy for Week 13/14
2. Integrate UIs together to show a consolidated single group project
3. Continue improving models to show reliability and accuracy
4. Report soft deadline – at least 1 week before actual deadline – to show draft and make improvements