

# 2025-09-13 Meeting Notes

## Date

13 Sep 2025

## Participants

- RAIL PG-2 project team
  - Tao Xu a1937511
  - Sheng Wang a1903948
  - Jinchao Yuan a1936476
  - Zilun Ma a1915860
  - Di Zhu a1919727
  - Yifan Gu a1909803
  - Tianhua Zhang a1915934
  - Zihan Luo a1916700

## Discussion topics

### 1. Share team progress in the first week of Sprint 3

- Feature engineering team:
  - Applied a resampling technique.
  - Tried out four handling imbalanced datasets techniques.
- Feature selection team:
  - Combined the RFE and the LightGBM and submitted to the leaderboard.
  - Tested the Lasso model by different feature extraction time windows to evaluate their impacts on model performance.
- ML model training team:
  - Tuned hyperparameters for the SVM model and ran on the IF platform.
  - The DNN model was connected to different datasets to evaluate model performance.
  - The Transformer model modified the design of sequence windows and calculated the F1 score on the testing dataset.

## **2. Discuss problems that were faced in the first week of Sprint 3**

- **IF platform execution time:** One team member from the feature selection team took over 7 hours to run the resampling task.
- **Task management in the production line:** There are many tasks related to feature selection and feature engineering. Many training and testing tables are created, so the ML model training team did not understand which table they could use.

## **3. Solutions:**

- **IF platform execution time:**
  - Report this problem on Teams.
- **Task management in the production line:**
  - Add a description for every task.
  - Remove test tasks in the team production line.

## **4. Discuss the snapshot 3.1**

- Check the content of the snapshot 3.1.
- Remove the Spike part of the Definition of Done for the snapshot 3.1, as there is no task about research.
- Add details for the Definition of Done for snapshot 3.1.

## **5. Next steps for the second week of Sprint 3**

- **Feature engineering team:**
  - Modify and improve the handling imbalanced datasets techniques.
  - Based on the new preprocessed training table, apply feature engineering techniques.
- **Feature selection team:**
  - Combine feature selection techniques with models and submit to the leaderboard to evaluate model performance.
- **ML model training team:**
  - Based on the F1 score, select the suitable dataset that was handled by different feature selection and feature engineering techniques.
  - Complete tuning hyperparameters for every model and create inferences to submit.