Declaration of Contributions

Yuqicheng Zhu

Responsible for: Project Management, ARIMA

- Project Planning and Management
- Data Collection (maintenance influence factor table and attribute table)
- Data Preprocessing (Missing value processing)
- Feature Engineering
    - Feature Extraction using "tsfresh"
    - 2.Layer Feature Selection (Statistical + Lasso Regression)
- Project Proposal (Support)
- ARIMA Model Design and Optimization
- ARIMA Deployment (online exogenous feature prediction)
- Poster Design and Production
- Report Support (Structure and Correction)
- ARIMA Documentation

Runyao Yu

Responsible for: ARIMA, Video

- Data Collection (search and download feature data)
- Demo Machine Learning Model Exploration (Linear Regression, ...)
- Project Proposal (Correction)
- ARIMA Demo Implementation
- Analysis of the ARIMA Results (create the feature correlation matrix)
- Video Production
- Report Support (Correction)

Han Liang

Responsible for: Web Backend, Data Preprocessing

- Data Collection (Investigation of the influence factors)
- Data Preprocessing (merge data from different sources)
- Project Proposal (Correction)
- Transformer Design (obtain the original transformer codebase)
- Web Backend Development with Django
- Docker Implementation
    - Local Docker File Creation
    - Local Docker Image Test
    - Docker Image Building with GitLab CI/CD
    - Docker Deployment/Test from container registry in kubernetes
- ARIMA/Transformer Deployment in Website (including modification of client.py)

Junpeng Chen

Responsible for: Web Frontend, Data Preprocessing

- Data Collection (obtain spot price from Montal API)
- Transformer Design and Demo Training

- Poster Video Production
- Web Backend Development with Django
- ARIMA/Transformer Deployment in Website (including modification of client.py)
- Web Fronted Design and Implementation

Xuyang Zhong

Responsible for: Transformer

- Data Collection (Investigation of the influence factors)
- Data Preprocessing (Feature Analysis + create correlation matrix)
- Transformer Implementation / Modification
- Transformer Documentation
- Report Support (Transformer part)

Yicong Li

Responsible for: Report

- Data collection (Investigation of the influence factors)
- Project Proposal
- Poster Design
- Transformer Deployment for Website
- Transformer Deployment in Google Cloud
- Report

Jiaxin Yang

Responsible for: Report

- Data collection (Investigation of the influence factors, search and download feature data)
- Project Proposal
- Poster Design
- Report

Declaration

We declare that the workload was fairly distributed according to the strength and background of group members. Everyone in the group has put enough effort into this project. **We confirm that the contributions mentioned above were documented during the project by Group Manager and they are in line with the facts.**

Signatures (Date, Location, Name)

- **Yuqicheng Zhu**:

  03.09.2021   Munich   Elyyngidrey.

- **Runyao Yu**:

  03.09.2021   Munich   Runyao Yu

- **Han Liang**:

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- **Junpeng Chen**:

  03.09.2021 Munich   Junpeng Chen

- **Xuyang Zhong**:

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- **Yicong Li**:

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- **Jiaxin Yang**:

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