MinJi Lee

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Auckland, New Zealand

Profile

Recent Engineering graduate with expertise in machine learning, statistical modeling, and data analysis. Developed data-driven solutions, including automating data extraction from complex research documents and building predictive models for market trend forecasting. Skilled at collaborating efficiently and adapting well in diverse teams. Eager to learn, solve complex problems and deliver impactful, data-driven solutions.

Projects

02/2024 – 10/2024 **Scraping Growth Hormone Data for patients from PDFs**
University of Auckland

- Developed a Python-based pipeline to automate the extraction of structured growth hormone data from unstructured PDFs, aiming to improve efficiency in clinical research.
- Designed and implemented machine learning models using tsfresh for feature extraction and scikit-learn for classification, achieving 82.6% accuracy in distinguishing scatterplots from other plot types.
- Built a YOLO-based object detection model to accurately identify and extract point locations from scatter plots, increasing accuracy from 67.5% (manual) to 99.8%.
- Demonstrated creativity, analytical thinking, and collaboration in developing a proof of concept tool for more efficient data extraction in medical research.

10/2023 **Ames Housing Price Prediction**

- Conducted exploratory data analysis on the Ames Housing Dataset with 79 housing features in R using Jupyter Notebook to identify key factors influencing house sale prices.
- Preprocessed data through cleaning, transformation and reduction, to ensure high quality inputs for predictive modelling.
- Developed, evaluated, and compared multiple regression models to identify the best model that balances accuracy and generalization for market predictions.
- Optimized hyperparameters of the top performing model, achieving a 5.89% prediction error, providing useful insights for forecasting trends in housing prices.

Professional Experience

12/2024 India **Sustainable Micro-Internship (Remote)**
Key Education Foundation

- Collaborated with a global, interdisciplinary team to propose solutions promoting inclusive childhood education through play as a developmental tool for children.
- Conducted in-depth analysis of cultural, socioeconomic, and systemic barriers, offering actionable strategies to enhance parental engagement and awareness of play's developmental value.
- Gained valuable experience in stakeholder analysis, teamwork, and problem-solving while addressing complex societal challenges.
- Demonstrated leadership by fostering openness, suspending assumptions, and integrating diverse perspectives to develop culturally relevant and impactful recommendations.

Skills

Programming & Tools
Python | R | Microsoft Excel | MATLAB | C++ | Git/GitHub

Operations Research
Linear/Integer Programming | Network Modelling/Optimisation | Multi-Objective Optimisation | Decision Making

Data Science
Data Analysis | Machine Learning | Predictive Modelling | Feature Engineering | Statistical Analysis | Databases

Soft Skills
Adaptability | Learning Agility | Problem Solving | Attention to Detail | Teamwork | Punctuality

Education

2021 – 2024 **Bachelor of Engineering (Honors) - Engineering Science**
University of Auckland
Studied Mathematical Modelling, Computational Mechanics, Data Science, Operations Research, Software Development