Ryan Li

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Education

McMaster University — Hamilton, ON
Bachelor of Science, CGPA: 3.7 — *Sept. 2023 – Present*

Iroquois Ridge High School — Oakville, ON
High School — *Sept. 2019 – June 2023*

Technical Skills

Languages: Python, JavaScript, HTML/CSS, R
Developer Tools: Git, Github, Kaggle, Jupyter
Libraries: pandas, NumPy, Matplotlib, Seaborn, Plotly
Frameworks: Pytorch, TensorFlow

Experience

Machine Learning Researcher — March 2024 – May 2024
Borealis AI — *Toronto, ON*

- Participated in the Spring 2024 Let's SOLVE it program at Borealis AI
- Worked in a team environment, collaborating with 3 team members on a project investigating post-liver transplant mortality
- Benefited from the mentorship and expertise of professional ML researchers at Borealis AI, contributing to the creation of high-quality work and achieving effective results
- Presented results of the 2 month project during the program's demo day

Projects

Post-Liver Transplant Mortality | *Python* — February 2024 - May 2024

- Collaborated on a team project aimed at developing and training a predictive model for post-liver transplant mortality rate, surpassing the performance of the MELD score
- Liver data was provided by emailing and negotiating with United Network for Organ Sharing,
- Conducted visualization analysis, feature engineering, and trained diverse models on liver data, including Decision Tree, Random Forest, Logistic Regression, and XGBoost
- XGBoost achieved the highest F1 score: 0.5, and ROC AUC: 0.84, while Logistic Regression obtained the greatest recall score: 0.6
- Implemented confusion matrix and visualization plots to assess performance of the models

NBA Players Analysis | *Python* — January 2024 - May 2024

- Performed analysis on height and weight of NBA players
- Visualized plots to show correlation between physical traits and game performance
- Developed trendlines to illustrate the evolution of three-point shooting among NBA centers across various eras
- Engaged in feature engineering, such as label and one-hot encoding to identify and explore targeted features for analysis.

NBA Player Salary Predictor | *Python* — May 2024 - July 2024

- Web scraped on Hoopshype to collect player salary data, player statistics were gathered from Kaggle
- Applied feature engineering techniques and integrated multiple data frames to select optimal features.
- Created a preprocessor pipeline to impute missing data, and one-hot encode categorical data
- Utilized regression models including Decision Tree, Random Forest, XGBoost, and AdaBoost. Random Forest model achieved highest performance, with an R^2 score: 0.67, and the lowest MAE and RMSE values
- Employed SHAP values to visualize feature importance and analyze key features

Personal Portfolio | *Python* — April 2024 - May 2024

- Created personalized portfolio website using HTML, CSS, and jQuery to display previous projects and achievements
- Icons were imported through Boxicons
- Used ScrollReveal.js and typed.js to produce smooth animations and user-friendly interface