

Ruilong Zhuang

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EDUCATION

Columbia University

M.S. Operations Research

Courses: Machine Learning, Deep Learning, Business Analytics, Analytics on the Cloud

Teaching Assistant: Analytics on the Cloud, Data Analytics

Sep 2020 - Dec 2021

New York, NY

Whitman College

B.A. Mathematics & B.A. Computer Science, Summa Cum Laude GPA: 3.9/4.0

Aug 2016 - May 2020

Walla Walla, WA

PROFESSIONAL EXPERIENCE

Data Science Intern

Otis Elevator Co.

Mar 2021 - Present

New York, NY

Unit Anomaly Prediction Project

- Processed and analyzed over 5M+ elevators maintenance records on Azure Databricks(Spark) and designed features for models
- Built machine learning pipeline and models to predict future callbacks, and leveraged techniques including SHAP to explain black-box models
- Influenced stakeholders to agree on key areas to focus on for callbacks reduction and potential opportunities of optimizing workload planning with models and feature explanations

Unit Health Project

- Recognized influencers of maintenance cost by conducting cohort analysis and worked with cross-functional teams from field, leading to further discussion on drill-down analysis to identify root cause
- Communicated with end-users to identify needs and interests through an iterative process
- Developed elevators health tracking metrics to improve efficiency of field office and produced dashboard visualization with definitions for development team

Management Consultant

Whitman Student Consulting Corp

Sep 2019 - Mar 2020

Walla Walla, WA

- Collaborated with a senior consultant to provide free management consulting services for a local non-profit
- Facilitated client meetings with director and key stakeholders to define priorities for development
- Presented action plan for doubling number of donors in two years by improving fundraising, marketing and communication

PROJECTS & LEADERSHIP EXPERIENCE

Revenue Optimization Tool for Airbnb Host in Austin

Technical Lead

Oct 2020 - Dec 2020

New York, NY

- Developed XGBoost model to predict listings' occupancy rate based on host's behaviors, listings' attributes and customer's experiences
- Provided actionable strategies for Airbnb hosts with a potential of increasing hosts' revenue by 10% on average, leading to an increase of approximate 10% of Airbnb's revenue

Kaggle Data Challenge: Riid Answer Correctness Prediction

Personal Project

Oct 2020 - Dec 2020

New York, NY

- Predicted students' future performance in exam using LightGBM model on ~100M training data, and boosted model accuracy from 55% to 76% by feature engineering and hyperparameter tuning

American Crossword Puzzle Solver

Team lead

Oct 2019 - Mar 2020

Walla Walla, WA

- Created a generic American crossword puzzle solver framework using Python and optimized it to solve a 6x6 puzzle in less than 4 minutes on average
- Scraped over 300,000 clues and words into a general knowledge database for NLP model training

SKILLS

Programming Language: Python(Pandas, NumPy, scikit-learn, PySpark, PyTorch), SQL, Scala(Spark), C++, R, Java, MySQL

Data Science/Machine Learning: Statistical Modeling, Machine Learning, NLP, Deep Learning, Experimental Design, A/B Testing, Time Series Analysis, Operations Research, Linear Algebra

Programming Tools/Framework: Google Cloud, Git, Tableau, Databricks, Docker, REST APIs, Plotly