Yuetong (Cathy) Li

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EDUCATION

The University of Chicago — Expected March 2025
- *Master in Statistics*

University of California, Los Angeles (UCLA) — Class of 2023
- *Bachelor of Science, Data Theory, Cum Laude* — Cumulative GPA: 3.93/4.0

SKILLS

Technical Skills: Python, R, SQL, JAVA, C++, Latex, MATLAB, Github, Excel, Tableau, Linux
Libraries: Pandas, NumPy, Matplotlib, Seaborn, Scikit-Learn, TensorFlow, PyTorch, dplyr, ggplot2, tidyr, caret
Certificate: CFA level I candidate
Language: Chineses, English, Shanghai dialect

EXPERIENCE

Toyota Technological Institute at Chicago (TTIC) — Chicago, IL
Research Assistant — Oct 2023 - Present
- Designed and implemented a Monte Carlo Tree Search (MCTS) algorithm for Connect Four, aiming to explore AI's potential to autonomously learn and adapt complex game strategies.
- Developed a robust Connect Four game simulation environment in Python, facilitating the testing and optimization of AI strategies through millions of automated game sessions.
- Utilized concurrent programming to enhance AI training process efficiency and scalability, accelerating the achievement of strategic proficiency in AI systems.

Shanghai Baosight Software Co., Ltd. — Shanghai, China
Data Engineer Intern — July 2023 - Sep 2023
- Engage in the development of financial reports, leveraging SQL to create customized reports from CDM to ADS, aligning with users' needs and transitioning away from Cognos in favor of FineReport.
- Modify API permissions and input parameters through SQL to establish distinct access controls for various reports and accounts, including those for the company, individual users and different departments.
- Thoroughly test and validate the functionality, appearance, and data accuracy of the reports as we transition to FineReport, ensuring a smooth and data-driven reporting experience.

Senior Capstone Project, cooperation with *Fingerhut* — Los Angeles, CA
Project Researcher — Jan 2023 - Mar 2023
- Processed 43 million records of user activity over seven days by cleaning outliers and encoding categorical data with Pandas and NumPy. Executed GPU-accelerated computations on UCLA's Joshua Server via SSH.
- Refined the selection of features for predicting user behavior to 14 key variables out of over 200 using XGBoost, leading to a prediction accuracy of 85%, validated by SVM, KNN, and Random Forest.
- Addressed analysis challenges by diagnosing collinearity with heatmaps and rectifying sample imbalance, boosting model accuracy by 10% with stratified sampling on purchase behavior data.

Hewlett-Packard Company (HP) | ParagonOne — Los Angeles, CA
Corporate Venture Capital & Business Analyst Intern — Aug 2022 - Oct 2022
- Establish 5 startup profiles based on product, profitability, and market to evaluate their investment potential.
- Build a business investment analysis by conducting correlation analysis among variables in 28 aspects and perform regression analysis to determine the variables relating to a startup's success and predict the total fund.
- Make a pitch presentation to recommend the top candidate from the above 5 startups.

PROJECTS

Predict Stock Price Movements Using Neural Network Models — Jan 2023 - April 2023
- Gathered Tesla's daily closing stock prices, utilizing Python for data normalization to enhance model accuracy.
- Developed neural network models (RNN, LSTM, GRU) with TensorFlow, incorporating SMA and EMA for trend analysis. Attained a notable RMSE close to 0.025 by fine-tuning model parameters.

Prediction of Voters in a County that Voted for Biden (*Kaggle*) — July 2022 - Aug 2022
- Utilize the data of 3,111 counties with 214 various demographics (age, gender, race, education, etc.) to predict the percentage of the voters in each county that voted for Biden during the 2020 US Presidential Election.
- Implemented Lasso regression, Random Forest, and Gradient Boosting Machine models, fine-tuning the hyper-parameters to achieve RMSE as 0.0658 by choosing GBM as our final model