Dan Yang

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EDUCATION

Northwestern University — Evanston, IL

B.S and M.S in *Computer Science* **|** Minor in *Data Science, Economics* — Expected March 2024

Kellogg Certificate Program for Undergraduates in *Managerial Analytics*

Cumulative GPA:	**3.75 / 4.00**	SAT: 1510 / 1600	SAT II Math II and Physics: 800/800
Relevant Coursework:	Algorithms, Machine Learning, Deep Learning, Operating Systems, Distributed Systems, Networking, System Security, Game Design, Agile Development, Algorithmic Game Theory, Statistics

EXPERIENCE

Tesla — Fremont, CA
Software Engineer Intern (Engineering Tools Team) — June 2023 – Current
- Led the development and design of a scalable, modular, and asynchronous bot framework, enabling integration with various internal tools for automating over 20 workflows, reclaiming 30+ weekly hours for the team *(Python, PostgreSQL, Linux)*
- Architected and established a microservices infrastructure and orchestrated seamless communication between microservices through well-defined APIs, optimizing the team's ability to develop, test, and deploy features rapidly *(Go, Docker)*
- Orchestrated application integration using a robust CI/CD pipeline and built containerized deployments *(GitHub Actions, Docker)*
- Revamped a legacy Java plugin for Atlassian products, benefiting the design and firmware teams with improved functionality and stability by replacing deprecated functionality and resolving long-standing issues *(Java, Maven, Atlassian SDK)*

Beacon Platform — New York City, NY
Software Engineer Intern (Sales Engineering Team) — June 2022 – August 2022
- Developed a new scalable web application for portfolio management resulting in a 30% increase in user efficiency and a 20% reduction in data processing time *(AWS, Python, MongoDB)*
- Extended a backtesting tool to enable intraday 5-minute interval portfolio calculations, facilitating the addition of a new feature for intraday portfolio visualization
- Collaborated with a team of 6 on the sales engineering team to prioritize and build key asset management use case tools; prepared and delivered 4 tailored proof of concept demonstrations to the sales team and potential clients

Tensorlet Lab (Northwestern, Columbia University) — Remote
Research Assistant/Open-Source Contributor — December 2021 – April 2022
- Conducted research on time series forecasting of crypto prices using models implemented in *PyTorch Lightning* framework
- Enhanced the FinRL-Meta library by seamlessly integrating support for generating 1-second financial data from Binance's REST API's raw tick-level data of crypto contracts *(Python, Numpy)*
- Backtested trading agents with mean reversion strategies resulting in improved risk-adjusted returns *(Python, Linux, Tmux)*

Northwestern University — Evanston, IL
Teaching Assistant — March 2021 – March 2023
- CS 349/449 (Machine Learning): Held office hours to teach best debugging and unit testing practices in VS Code *(Python)*
- IEMS 304 (Statistical Learning for Data Analysis): Designed supervised learning ML labs for time series regression and classification tasks in to help students learn best-practices for feature extraction and model selection *(RStudio, R)*
- CS 340 (Computer Networking): Mentored over 50 students on 8 assignments on network fundamentals *(Python, C++)*

PROJECTS

QuickNav: Efficient Macro-Oriented File Browsing Terminal — May 2022 – Current
- Engineered a cross-platform GUI tool in *C*++ combining functionalities of media viewer, file navigator, and terminal
- Implemented multithreading and concurrency strategies for media rendering resulting in a notable 40% reduction in loading time

Research: Divvy Bike Station Availability Forecast — January 2022 – March 2022
- Designed a novel data science study of Divvy bike availability at stations across Chicago and Evanston to provide a report for managing bike inventory at 3 stations located around the Northwestern campus
- Adapted a state-of-the-art time series forecast deep learning algorithm to produce 1-day-ahead forecast of bike demand at specific stations with 87% accuracy to assist bike inventory management

SKILLS

Languages:	Python, C++, Go, R, Java, JavaScript, SQL, C#, Bash
Technologies:	React, Flask, Scikit-learn, Gin, Keras, Pandas, Numpy, PyTorch, Tensorflow
Tools:	Git, Linux, Docker, AWS, Apache Spark, Tmux, PostgreSQL, Postman, Google Firebase, Jira, GitHub Actions