Wilson Tu

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EDUCATION

Georgia Institute of Technology — August 2023 – Present
Master of Science in Computer Science — *Atlanta, GA*

California State University, Fullerton — August 2020 – May 2023
Bachelor of Science in Computer Science — *Fullerton, CA*

EXPERIENCE

Software Engineer — October 2022 – Present
LongPath Technologies, Inc. — *Boulder, CO*
- Designed and deployed a real-time alert system for emission data utilizing Mosquitto MQTT, resulting in overall improved monitoring and responsiveness to potential emission issues for customers.
- Developed and implemented an emission event simulation tool that improved efficiency and reduced time spent creating test emission data by 99%.
- Improved system stability and reliability through regular performance testing, monitoring, and updates to backend API, addressing bottlenecks and resolving race conditions.

Software Engineer Intern — June 2022 – August 2022
Capital One — *McLean, VA*
- Developed an internal web application tool that displays aggregation charts for NPSL account, transaction, and product information for financial analysis and data visualization using React, Chart.js, and AWS.
- Performed extraction, transformation, and batch processing on over 15,000 records from CDE exhaust pipeline for data aggregation using Databricks and PySpark.
- Implemented a DynamoDB writer using Boto3 that processed and converted data frames to JSON objects for database cloud storage.

Full-Stack Engineer Intern — October 2021 – March 2022
Teder — *Manhattan, NY*
- Led the development of a client-facing web dashboard application that displays high-level artist information such as revenue, show times, and total sales using React, Django, MongoDB, and AWS Cognito.
- Refactored 2000+ lines of JavaScript code to improve optimization and web performance by more than 25%.
- Conducted UX/UI research and designed 15+ low and high-fidelity wireframes for new features using Figma.

Front-End Engineer Intern — June 2021 – September 2021
Onntek — *Los Angeles, CA*
- Deployed and maintained web and mobile applications across 3 different platforms for residential and commercial construction businesses using React and React Native.
- Integrated features for interactive blueprint planning and design to decrease client workload by more than 70% and generated an overall increase in revenue.
- Utilized K6.io to test web performance and refactored existing codebase by implementing memoization and code splitting to decrease application load time by 20%.

PROJECTS

Machine Learning High Frequency Trading Bot | 🎧 *Python, yfinance, Pandas* — August 2022 – May 2023
- Developed and implemented a bot using the yfinance API and LSTM-based machine learning model to predict future market trends and optimize trading strategies.
- Conducted rigorous backtesting and cross-validation, achieving a remarkable 97% accuracy in test results, which demonstrated the model's robustness and consistency in a live trading environment.
- Developed an intuitive frontend interface to visualize and interact with real-time trades, allowing users to monitor and analyze the model's algorithm-driven decision-making process seamlessly.

TECHNICAL SKILLS

Languages: Java, Python, C/C++, SQL, TypeScript, JavaScript, HTML/CSS, R
Technologies: React, Angular, React Native, Django, MongoDB, PySpark, Databricks, TensorFlow, Apache Spark
Cloud: Docker, Amazon Web Services (AWS), Google Cloud Platform