Wilson Tu

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Education

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

Experience

Software Engineer Intern — June 2022 – August 2022
Capital One — *McLean, VA*

- Designed and developed an internal web application tool that displays aggregation charts for NPSL account, transaction, and product information using Chart.js, TypeScript, AWS DynamoDB, Lambda, ALB, and S3.
- 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 converts data frames to JSON objects for database 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 user research and designed 15+ low and high-fidelity wireframes for new features using Figma.
- Participated closely in design and planning sessions with CTO and marketing team to provide guidance and feedback that led to a 20% increase in deliverables by improving team collaboration.

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

Plant Partner Android App | *Java, Kotlin, MySQL* — January 2022 – May 2022

- Contributed to the development of an Android mobile application using Java and Android Studio that pairs users with a plant and includes a care tracking feature that includes a calendar and watering reminder.
- Created to allow user-personalized plant pairing which can log all plants into a care tracker that allows the user to organize and consolidate all plant needs.
- Developed the front-end, data fetching layer, and overall UX/UI design of the application.

Self-Learning Flappy Bird AI | *Python, NEAT, Tkinter* — August 2021 – September 2021

- Implemented the Python NEAT (NeuroEvolution of Augmenting Topologies) module to create an artificial neural network to automatically plays and never lose in Flappy Bird.
- Enhanced algorithm's effectiveness by 10% by referencing NEAT documentation and tweaking parameters.
- Developed an algorithm that relies on fitness functions to compute the quality of individual genomes to reproduce better fitted generations and offspring.

Global Covid-19 Web Tracker | *React, Mathdroid API, Javascript, Git* — May 2020 – June 2020

- Created a simple tracker application using Mathdroid's Covid-19 API that displays a real-time updated visualized chart using Chart.js, React Hooks, Material UI, and API data fetching.
- Utilized Material UI framework and referenced documentation to create responsive components and styling.

Technical Skills

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