Steve Wang

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SKILLS

Expertise: Full-stack Development, Cloud Computing, Data Engineering, Machine Learning, Embedded Systems.
Languages & Tools: Python, Java, JavaScript, C, C++, C#, SQL, Bash, PostgreSQL, MATLAB, Docker, Git.
Technologies: AWS, React, Django, Flask, Spring Boot, Redis, NumPy, Pandas, Scikit-learn, TensorFlow.

EXPERIENCE

Amazon Web Services (AWS), Seattle, WA. May 2024 – Aug. 2024
Software Development Engineer Internship
Tech Stack: Python, AWS (Lambda, Fargate, S3, DynamoDB, Redshift, IAM), Docker, Boto3, AWS CDK.

- Designed and implemented an end-to-end business data forecasting service for AWS Snow internal customers, enhancing planning and time management by addressing limitations of existing generic estimations.
- Developed a robust machine learning model to accurately predict service lead times across multiple percentiles, overcoming challenges of imbalanced and limited data through various feature engineering techniques, including survival analysis and tailored lag features.
- Implemented and deployed a weekly model training pipeline to process long-term data and retrain the model, along with a daily batch prediction pipeline to handle short-term data and generate daily predictions, ensuring up-to-date and accurate machine learning results.
- Engaged with multiple internal customers and collaborated closely with UX designers to create a user-friendly Slack bot interface, guaranteeing the service met customer needs and was both accessible and easy to use.

PROJECTS

TracCrop: Master's Degree Capstone Project. Ithaca, NY. Oct. 2023 – Present
Tech Stack: JavaScript, Python, React, Django, SQL, Redis, Azure.

- Maintained and enhanced an Agriculture Business and Data Management Platform for North American farmers, streamlining chemical usage, policy compliance, and workforce and task management within a unified system.
- Implemented specialized workflow controls and data visualization features from customer feedback. Developed the front-end interface and corresponding RESTful web services, enhancing agricultural management efficiency.
- Optimized data retrieval by implementing a Redis-based caching layer, reducing business dashboard and report page load times from an average of 12 seconds to under 1 second, significantly improving the customer experience.
- Developed an automated ETL pipeline to regularly update reference data from public chemical and agricultural sources, ensuring database accuracy and maintaining up-to-date information.

Interactive LED Clock (Embedded System Course Project). Ithaca, NY. Nov. 2023
Tech Stack: C++, Python, Raspberry Pi, GPIO, Multi-threading.

- Designed and developed an interactive LED clock using a Raspberry Pi, featuring a continuous display across three LED pixel panels with a gravitational sensor input for dynamic orientation and effects.
- Created user interaction features, including gravity-based orientation and snowflake pixel effects managed through a gyro sensor, as well as an alarm settings interface activated via physical buttons connected through GPIO.
- Developed a custom inter-process FIFO driver for a 3-panel LED display, enabling efficient and reliable pixel data transfer and real-time updates across multiple threads, facilitating smooth performance and seamless custom animations on the LED matrix.

Multiplayer Rogue-like Game (Software Engineering Course Project). Atlanta, GA. Sep. 2022 – Dec. 2022
Tech Stack: C#, Unity.

- Worked with a team of five using Scrum methodology to create an online, multiplayer, rogue-like pixel game where players control a ghost with the ability to possess enemies and harness their powers.
- Utilized Unity's Random Function to generate procedurally generated dungeons with prefab-based room and corridor structures, ensuring unique levels for each playthrough.
- Implemented enemy behaviors with tailored abilities, interactive logic, and custom animations, enhancing the game's challenge and deepening player engagement.

EDUCATION

Cornell University. Ithaca, NY. Sep. 2023 – Dec. 2024 (Expected)
Master of Engineering, Electrical and Computer Engineering, GPA: 3.55/4.00.

Emory University. Atlanta, GA. Sep. 2021 – May 2023
Bachelor of Science, Mathematics & Computer Science, GPA: 3.57/4.00.

AWARDS AND ACHIEVEMENTS

Bronze Medal, Top 8% (69/937), Lyft Autonomous Vehicles Motion Prediction, Kaggle Competition. Nov. 2020