Marco Wang

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Work Experience

Rabbit
Los Angeles, CA

Software Engineer, Cloud
Feb. 2024 - Present

- Spearheaded the development of LAM Playground (Large Action Model), processing 10K+ monthly interaction, launching one of the first consumer facing computer-use AI assistants, enabling users to control virtual browsers via LLM agents with 85% accuracy.
- Led redesign of core AI agent architecture implementing hierarchical planning system handling 50+ action types, reducing task failures by 30%.
- Pioneered LLM-based generative UI system enabling real-time interface customization, resulting in 60% of users creating personalized layouts and increasing daily user retention.
- Built the user web portal (rabbithole) from 0-to-1, iteratively refined through 2 major UX revisions, supporting 80K+ users and reducing onboarding-related support tickets by 70%
- Developed internet search and memory retrieval system handling 50K+ daily queries, enabling assistant to process complex multi-turn requests, improving response accuracy and removing irrelevant results.

The Boring Company
Las Vegas, NV

Software Engineer Intern
Jun. 2023 - Aug. 2023

- Developed a full-stack fleet maintenance platform using React/TypeScript, PostgreSQL, reducing vehicle downtime and consolidating 100+ monthly maintenance tickets with 30+ hour monthly time savings
- Architected and deployed a simulator for the Vegas Tunnel Loop, enabling validation of collision safety systems and future station designs.
- Built a physics engine that simulated vehicle dynamics and passenger flow with $\geq$ 90% accuracy, enabling high-fidelity capacity planning.
- Implemented a cache-based path-finding algorithm for the simulator, reducing average compute time from 3 minutes to 10 seconds.
- Created a regulatory compliance dashboard monitoring 200+ processes, improving completion rates by 25% through automated alerts and reducing compliance audit preparation times.

Workiva
Chicago, IL

Software Engineer Intern
Jun. 2022 - Aug. 2022

- Improved document processing efficiency and reliability for an online document editor using Java and Go, focusing on fonts and file I/O.
- Automated a critical weekly font upload process by building a browser-based client using PHP and Bash, reducing time spent by 90%.
- Improved document color fidelity by 20% on PDF export for charts, fonts, and images by integrating API endpoints with open-source software.
- Designed and built a smoke testing suite using Puppeteer, improving code coverage and efficiency of detecting breaking changes.

Technical Projects

Personal Projects
Los Angeles, CA

Self-Directed
Jan. 2022 - Present

- **Scribe:** Coded a web app to generate notes and study guides from live audio by using LLMs and vector stores, optimizing student workflows.
- **Tomo:** Built an LLM-based toy, enhancing children's learning through story-driven dialogues, using async audio interfacing in Python.
- **Platz UI:** Developed a designer-centric UI component library in NextJS, streamlining the design-to-implementation process.

Igloo Chat App
Evanston, IL

Full Stack Developer
Feb. 2022 - Sep. 2022

- Handled full-stack tasks for the development of a social media chat app using the Laravel, Firebase and React Native stack.
- Implemented REST APIs and database schemas for user messaging and analytics using the model-view-controller design pattern in Laravel.
- Deployed and tested an MVP, validating design choices through active feedback from a 30-student pool.

Education

Northwestern University
Evanston, IL

M.S. in Computer Science, B.A. in Physics [GPA: 3.95/4.00]
Mar. 2024

Skills

Programming   Typescript · Python · Go · Java · C/C++ · SQL · Jupyter · PHP · Bash · C#

Technologies   Node.js · NextJS · MongoDB · postgresSQL · Docker + K8s · sqlite · PyTorch