# Marco Wang

 marcowang.me  |   marcowang01  |   marco-01  |  Los Angeles, CA

## 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 on the r1 device, resulting in 60% of active users creating personalized layouts and increasing daily user retention.
- Built the user web portal (hole.rabbit.tech) from 0-to-1 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, validating collision safety scenarios and reducing station design iteration time.
- Built a physics engine that simulated vehicle dynamics and passenger flow with $\geq$ 90% accuracy, enabling 30% throughput increase in 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.

### Workivaw
*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
*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: 3.9/4.0]
*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