

Kevin Huang

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EDUCATION

University of Waterloo

Bachelor of Computer Science - GPA: 3.9/4.0

2021 Sep - 2026 Apr

Waterloo, ON

SKILLS

Languages: TypeScript, Rust, Python, Go, JavaScript, C++, SQL, HTML, CSS, JSON

Full Stack: PostgreSQL, MySQL, Next.js, Node.js, React, Svelte, Tailwind CSS, gRPC, GraphQL, WebSocket

Tools: PyTorch, Kubernetes, NumPy, TensorFlow, Git, GitHub Actions, Docker Compose, Linux, Google Cloud, AWS

WORK EXPERIENCE

NVIDIA

Research Assistant

Oct 2024 — Jan 2024

Santa Clara, California

- Intern at NVIDIA's GEAR (Generalist Embodied Agentic Research) group, contributing to research on AI foundation models for embodied agents in virtual and physical worlds.
- Enhancing large-scale robotics simulation frameworks, with a focus on physics engine stability and adapting simulation environments for *humanoid robotics* applications.

Tesla

Full-stack Software Developer

Jan 2024 — Apr 2024

Palo Alto, California

- Worked full-stack on Tesla's electrical distribution management system servicing *hundreds* of engineers worldwide using *Go*, *React*, *GraphQL* and *Kubernetes*.
- Safeguarded database with *hundreds of millions* of rows by creating a SQL schema migration tool in *Go*. Integrated within our deployment pipeline with ArgoCD, detected *5+* non-reversible migrations in just a month.
- Enhanced architecture reliability by integrating *Redis* into our Kubernetes cluster and devising caching strategies for efficient Jira data management, reducing latency by 50% for key GraphQL operations.

Trexo Robotics

Software Developer

May 2023 — Aug 2023

Mississauga, Ontario

- Re-engineered exoskeleton software from *C++* to *Rust*, achieving functional equivalence while improving software safety and reliability. Developed a *gRPC* client in *Go* for robust and efficient inter-process communication.
- Bolstered data security by implementing OAuth with *Google Cloud* and AWS Cognito ensuring secure and scalable user authentication.
- Streamlined defect diagnosis by *Dockerizing* internal tools and automated deployment via GitHub Actions.

Ford Motor Company

Vehicle Software Developer

Sep 2022 — Dec 2022

Oakville, Ontario

- Contributed to Ford's Fully Networked Vehicle architecture by developing a multi-threaded DoIP server in *Python*, automating manual testing and facilitating rigorous stress tests of message gateways over TCP and UDP.
- Implemented a *C++* debugging interface, streamlining access to system states from the terminal during testing.

COMPETITIONS AND PROJECTS

LeRoi Robotics | World Champion Robotics Competition Team

C++, *C#*, *React*

- *World Champion* in the world's largest robotics competition. Led coding initiatives and self-taught C++, helping our team outperform the runner-up by 32% in the 2021 VEX Robotics Competition.

Lodestone | Intuitive Server Control Suite

Rust, *React*, *Next.js*, *TypeScript*, *Tailwind*, *WebSocket*

- Development and *shipped* a user-centered self-hosting solution for multiplayer game servers, garnering *750+ GitHub stars*, *12000+ downloads* and a dedicated community of *900+ monthly active users*.
- Collaborated with designers on a custom component library of 30+, implemented with *Tailwind* and *Storybook*.
- Invited to speak about Lodestone's applications of the Rust programming language on the largest Rust podcast.

RESEARCH EXPERIENCE

Research Assistant

Dynamic Graphics Project lab of the University of Toronto

Toronto, Ontario

- Advanced the lab's 3D visualization capabilities by developing a VR mesh viewer in C++ and OpenGL for the geometry processing library, libigl, enabling stereoscopic, hand-tracked navigation of 3D meshes.