

# Isaac Huang

isaac.huang@uwaterloo.ca

+1 (587) 966-9463 | [www.linkedin.com/in/isaac-huang-0b3027246](https://www.linkedin.com/in/isaac-huang-0b3027246)

## TECHNICAL AND SOFT SKILLS

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**Programming Languages:** Python, Java, C++, C, JavaScript, Typescript, Swift, HTML, CSS

**Python Libraries:** Tensorflow, Numpy, Matplotlib, OpenCV, Pandas

**Frameworks:** Spring Boot, React JS, React Native, Aurelia, Pytest, LangChain

**Java Development Tools:** Lombok, Chaquopy ADB, Gradle, Maven

**Development Tools:** Git, Github, Bitbucket, Kubernetes/Kubectrl, Linux CLI, IntelliJ, VS Code, AWS

**Soft Skills:** Communication, Teamwork, Time Management, Problem Solving

## PROFESSIONAL EXPERIENCE

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### AI Developer/Researcher

09/2024 - Present

*Solace*

*Ottawa, Canada*

Contributing as part of the AI Integration team to build an in-house agentic AI system aimed at optimizing developer efficiency, accelerating customer support, and enhancing managerial insights

- Implemented a test suite to evaluate LLM generation quality, including its effective use of agents in an agentic AI system, reducing errors and cutting bug reports and urgent fixes related to text generation by 15%
- Created a specialized LLM agent with Python to parse Datadog logs, isolating error messages and generating concise diagnostics, reducing debug times up to 20%
- Developed an end-to-end ChatGPT-style gateway for an in-house agentic AI system, streamlining user access to critical information and enhancing usability

### Full-Stack Developer

01/2024 - 04/2024

*Solace*

*Ottawa, Canada*

Member of the mission control full-stack team responsible for building new backend features

- Optimized cloud storage size by analyzing historical usage, reducing storage costs by 35%
- Designed an excess storage calculator that facilitated individualized billing for customers, enhancing transparency and reducing client billing queries
- Employed Java in conjunction with Spring Boot to develop backend features
- Deployed Kubernetes microservices on various cloud providers, such as GCP, AWS, and Azure, leveraging its capability for efficient scaling and management
- Enabled users to forward/send system logs through the more secure TLS protocol
- Used Whitesource and Prisma Cloud to find and quickly fix security vulnerabilities
- Ranked as an **outstanding** intern (the highest possible rating level)

### Web Developer/QA

05/2023 - 08/2023

*Deep Trekker*

*Waterloo, Canada*

Member of the web development team responsible for building the UI and API for remote controlling robots.

- Developed a ReactJS-based front end UI for controlling underwater ROV sensors, movement, and mechanics, enabling real-time feedback and control
- Performed rigorous quality control assessments, achieving a 98% product standard compliance rate
- Ranked as an **outstanding** intern (the highest possible rating level)

## EDUCATION

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### University of Waterloo

09/2022 - 05/2026

*Candidate for BASc. - Computer Engineering*

*Waterloo, Canada*

Relevant Courses:

- Algorithms and Data Structures
- Multi-threaded Programming

### Coursera

03/2020 - 02/2024

*Received a certificate in all courses listed*

*Online*

- Object Oriented Programming in Java Specialization
- Tensorflow Developer Professional Certificate (4 course specialization)
- AI for Everyone
- Generative AI with Large Language Models

## PERSONAL PROJECTS

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### LNReader | *React Native, Java, Python, Chaquopy, Typescript, Gradle, Git*

05/2023 - 07/2024

Collaborated with international developers to bring a novel reading app to Android with the Github repository accumulating over 1400+ stars and 30 thousand monthly downloads.

- Utilized Java, React Native and Typescript to create responsive UI and compartmentalize code
- Integrated the Chaquopy SDK to offload complicated data processing to a Python interpreter
- Implemented a feature to parse and display EPUB files to expand novel sources

### AzurAuto | *Python, Tensorflow, Keras, OpenCV*

05/2022 - 01/2023

Developed an intelligent program to play a sidescrolling shooter game, effectively reducing the time spent playing the game manually by nearly 60%.

- Used Tensorflow in Python to identify and track in-game assets
- Annotated a custom dataset of in-game assets to train and evaluate the object detection model
- Experimented with different CNN architectures (e.g. MobileNet, Resnet) and hyperparameter tuning to optimize the model's accuracy and performance

## PUBLICATIONS AND PRESENTATIONS

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Zhiqiang Jiang, **Isaac Huang**, Xin Wang. 2024. *IndoorRoaming: An LLM-based System for Indoor Tour Guidance*. The 4th ACM SIGKDD Workshop on Deep Learning for Spatiotemporal Data, Applications, and Systems (DeepSpatial 2024), Barcelona, Spain, Aug 26, 2024.

## EXTRACURRICULAR ACTIVITIES

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### Waterloo Engineering Endowment Funding Council

09/2022 - Present

*Computer Engineering Department Student Representative*

*Waterloo, Canada*

- Advocated for and secured funding for undergraduate laboratory equipment and academic tools, enhancing learning resources for over 10,000+ students annually
- Gathered and synthesized feedback from the student body to advise the council on key funding priorities, resulting in a record amount of funding for engineering design teams

## INTERESTS & ACTIVITIES

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**Interests:** Gunpla model building, 3D modelling, PC building, Piano

**Sports:** Swimming, Badminton, Ping Pong