Isaac Huang

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Technical and Soft Skills

Programming Languages: Python, Java, C++, C, JavaScript, Typescript, Swift, HTML, CSS
Frameworks: Spring Boot, React JS, React Native, Aurelia
Python Libraries: Tensorflow, Numpy, Matplotlib, OpenCV, Pandas
Java Development Tools: Lombok, Chaquopy ADB, Gradle, Maven
Development Tools: Git, Github, Bitbucket, Kubernetes/Kubectl, Linux CLI, IntelliJ, VS Code, AWS
Soft Skills: Communication, Teamwork, Time Management, Problem Solving

Professional Experience

AI Developer/Researcher 09/2024 - Present
Solace *Ottawa, Canada*

Member of the AI Integration team that developed an in-house AI system to enhance developer efficiency, expedite customer support, and improve managerial oversight

- Developed a test suite to assess AI system performance using ROUGE metrics and Anthropic's Claude model
- Engineered an agent to process Datadog logs using an LLM to identify relevant error logs and provide human-readable responses, resulting in a 20% reduction in debug times

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 based on historical usage data, cutting storage costs by roughly 35%
- Enabled users to forward/send system logs through the more secure TLS protocol
- Created an excess storage calculator to facilitate individualized billing for customers
- 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
- Used Aurelia to build responsive front end web applications
- 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 web-based UI for controlling the sensors, movement and mechanical components of underwater ROVs
- Performed rigorous quality control assessments on hardware and software to maintain product standards
- Utilized ReactJS, Tailwind and Typescript
- Ranked as an **outstanding** intern (the highest possible rating level)

Education

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

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
- Achieved a total loss of less than 0.05 during testing, giving stunning accuracy

Publications and Presentations

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

Waterloo Engineering Endowment Funding Council 09/2022 - Present
Computer Engineering Department Student Representative *Waterloo, Canada*

- Contributed to the council's goal of funding undergraduate laboratory equipment, student projects, computer upgrades, and academic tools/teaching facilities
- Represented the student body and provided feedback to the council on student needs and priorities

Interests & Activities

Interests: Gunpla model building, 3D modelling, PC building, Piano
Sports: Swimming, Badminton, Ping Pong