Nicholas Hioe

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EDUCATION

University of Waterloo　09/2022 – Present
Bachelor of Computer Science
Coursework: Data Structures, Algorithms, Operating Systems, Object-Oriented Programming, CX/UX Design

SKILLS

Languages: Python, JavaScript, TypeScript, C++, Java, SQL, HTML/CSS
Frameworks: React, Electron, Express, Spring Boot, Flask, Jest, Cypress, Playwright, Material-UI, Sass, Bootstrap
Tools: Git, Bash, Docker, MySQL, Azure Cosmos DB, JMeter, Gatling, Postman, Figma

EXPERIENCE

Develop for Good　San Francisco, CA
Software Engineer (Volunteer)　*05/2025 – Present*
- Developing user authentication flows and matching algorithms for a nonprofit platform connecting individuals from marginalized communities with supportive families.

Connex Telecommunications　Markham, ON
Software Engineer　*01/2025 – 04/2025*
- Built a generative AI platform emulating live customer service calls to onboard and train contact center agents.
- Engineered a templating system with few-shot prompting for an OpenAI service, customizing outputs and integrating with Azure TTS for emotionally dynamic conversations.
- Designed an interactive React/TypeScript dashboard to track 8+ KPIs, helping managers refine agent training.
- Developed REST APIs in Java Spring Boot with Azure Cosmos DB, implementing query caching, batching, and data partitioning to reduce dashboard latency by 25%.

Orion Health　Toronto, ON
Software Developer　*05/2024 – 08/2024*
- Automated nightly deployments and email reports with Python scripts, reducing turnaround time by 90%.
- Built clinical portal pages using JavaScript and CSS to create a centralized patient data repository, increasing accessibility for thousands of clinicians and patients in Ontario.
- Integrated Playwright smoke tests into GitLab CI/CD pipeline using TypeScript, Bash, and Docker, improving regression detection by 30% and accelerating developer feedback cycles by 2+ hours.

Mathematics Society (University of Waterloo)　Waterloo, ON
Software Developer (Volunteer)　*05/2024 – 08/2024*
- Led site migration from WordPress to a custom Express CMS, improving scalability for services supporting 9,000+ mathematics students at the University of Waterloo.
- Developed admin tools in React for querying and filtering image assets displayed across CMS-driven pages.

MH Design　Markham, ON
Software Developer　*08/2023 – 10/2023*
- Developed an Electron.js application to automate a background process for scheduling visa appointments.
- Automated browser workflows using Puppeteer (Node.js), reducing task time from 5 minutes to under a minute.
- Reduced webpage data extraction failure rate by 60% using rotating proxies and network request interception.

Miovision　Kitchener, ON
Software Quality Analyst　*05/2023 – 08/2023*
- Increased test coverage to 90% by developing a Cypress end-to-end test suite for a traffic video data platform.
- Automated load testing with JMeter and Gatling to benchmark API performance under 1,000+ concurrent users.

PROJECTS

Real-Time Lip-Reading Transcriber | *JavaScript, React, Material-UI, Python, Flask*
- Integrated a lip-reading API for real-time video, using a classification model to flag/correct mistranscribed words.