

Jerry Han

Software Developer | React, TypeScript, Node.js, PostgreSQL

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EXPERIENCE

MissionPerform

Mississauga, ON

Full Stack Developer Co-op

Sep. 2025 – Dec. 2025

- Developed full-stack features for a configuration-driven workflow platform across React and TypeScript interfaces, Node.js and Express REST APIs, Joi validation, and MongoDB persistence.
- Built reusable components for dynamic forms, workflow progression, status visualization, business-object selection, media management, and date and time inputs.
- Traced media-update behavior across frontend state, API payloads, validation, and persistence, then refactored the flow so pending changes remained local until final submission.
- Contributed through testing, code reviews, technical documentation, sprint planning, and Git-based delivery.

Cineplex Digital Media, Custom Software Development

Toronto, ON

Junior Software Developer Co-op

Sep. 2023 – Apr. 2024

- Developed, tested, debugged, and maintained customer-facing digital display and kiosk applications using React, TypeScript, JavaScript, HTML, and CSS.
- Implemented session-inactivity behavior that cleared customer data and delivered interface and data-driven content updates across interactive kiosk and display environments.
- Created and executed test cases, validated behavior locally and on display hardware, and collaborated with developers, QA, designers, and stakeholders throughout delivery.

PROJECTS

PostgreSQL Database Internals | *Academic Project*

Winter 2026

C, PostgreSQL 17.2, SQL, Buffer Management, Query Processing, Bloom Filters

- Modified PostgreSQL source code to implement and evaluate LRU, LFU, and MRU buffer-replacement policies alongside its Clock policy using sequential- and index-scan workloads.
- Extended hybrid hash-join behavior with Bloom-filter runtime filtering and studied selectivity, false-positive trade-offs, catalog statistics, and optimizer join choices.

LangChain InjectedToolArg Schema Contribution | *Pull Request #28435*

Winter 2025

Python, LangChain, Pydantic, JSON Schema

- Investigated schema-generation failures involving runtime-injected tool arguments and contributed argument-detection, filtering, and Pydantic schema-handling changes.
- Submitted pull request #28435 with a unit-test case and runnable examples demonstrating the proposed behavior for tool schema generation.

Softoom – 3D Virtual Room Web Application | *Academic Team Project*

Winter 2023

Angular, JavaScript, Three.js, Node.js, REST APIs, Stripe, SendGrid

- Worked with a small team to build a full-stack 3D room application with Angular interfaces, Three.js movement and room interactions, and Node.js application services.
- Connected room, user-state, ordering, inventory, and hunger-tracking workflows and integrated Stripe checkout with SendGrid order-confirmation emails.

TECHNICAL SKILLS

Languages: TypeScript, JavaScript, Java, Python, SQL, HTML/CSS

Frontend: React, React Native, Redux, React Router, Angular, Three.js

Backend & Databases: Node.js, Express.js, REST APIs, PostgreSQL, MongoDB, Mongoose, Joi

AI & Agent Tooling: Prompt Engineering, Agentic Workflows, LangChain, MCP Integrations

Cloud & DevOps: AWS Fundamentals, Docker, Git, Linux, Bash, CI/CD

EDUCATION

University of Toronto Scarborough

Toronto, ON

Honours Bachelor of Science (Co-op), Computer Science Specialist

Sep. 2020 – Jun. 2026