

JAMES YANG

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EDUCATION

University of Western Ontario

Bachelor of Computer Science

London, ON

September 2022 – Expected April 2027

- Relevant Coursework: Data Structures & Algorithms, Operating Systems, Distributed Systems.

EXPERIENCE

Software Developer Intern

RBC Amplify

May 2025 – August 2025

Toronto, ON

- Created an award-winning liquidity forecasting platform using a scalable full-stack architecture, which resulted in winning a \$20K Industry Disruptor Prize and adoption by Commercial Banking to oversee \$10B+ in annual transactions.
- Built a multi-user synchronization engine on Python FastAPI WebSockets, adapting algorithms from Figma's published research to hold state consistent across simultaneous editors during collaborative financial modeling.
- Designed an interactive "infinite canvas" interface in React.js backed by tree-based data structures, giving users a visual node graph where they drag and drop connections to map complex cash flows.
- Split client onboarding across three specialized AI agents (Analyzer, Architect, Recommender) running as Python microservices, automating the process and cutting manual structuring time by 92%.
- Stood up a CI/CD and hosting pipeline on OpenShift (Kubernetes) with internal banking tooling, sustaining high availability for persistent WebSocket connections inside a secure enterprise environment.

Contract Software Engineer

Boardy (AI networking agent startup)

February 2025 – May 2025

Remote

- Engineered an autonomous meeting agent on Recall.ai, Deepgram, and LiveKit, reaching a 99% join success rate and sub-500ms voice response times across Zoom and Google Meet.
- Cut inference costs 40% by layering models of different sizes behind context-aware prompt chaining, keeping the agent able to navigate unstructured conversations.
- Deployed event-driven infrastructure on Railway with dynamic worker pools and custom automatic scaling through Railway's GraphQL API, supporting 50+ concurrent audio streams without performance degradation.

PROJECTS

OpenWorker | Merged contributor, [andrewyng/openworker](#), open-source AI agent (12,000+ stars) | Python, MCP

- Fixed a remote code execution flaw where cloning any repository let its configuration file silently launch processes on the user's machine as soon as the project was opened.
- Gated that configuration behind the project's existing trust check, blocked by default across all three load paths, and added regression tests proving untrusted projects cannot launch processes or override trusted server names; a maintainer verified the fix against the original proof-of-concept.

Nodes | [thenodes.ca](#), 1,000+ installs | React, TypeScript, Firebase, Chrome APIs

- Built and shipped a LinkedIn outreach Chrome extension solo in under a month, growing to 1,000+ installs and 17,000+ profiles indexed to date.
- Ran extraction client-side through a queue that opens each search results page in a hidden iframe inside the user's own logged-in session, parsing against fallback selector chains so a LinkedIn markup change drops single fields instead of failing the run.
- Paced the queue with delays between loads to keep activity within the rhythm of ordinary manual browsing, prioritizing users' account safety over extraction speed.

FurMe | 1st overall, UofTHacks 11 (600+ hackers, University of Toronto) | Python, OpenCV, Arduino, React, DeepFace, WebSockets

- Combined OpenCV face-tracking with an Arduino servo controller into a closed-loop system that physically rotates the device to center the user in the camera's viewport in real-time.
- Layered DeepFace emotion detection with Cohere and OpenAI for conversational context, so the assistant responds verbally and curates Spotify playlists from live sentiment analysis.
- Developed an IoT teleoperation dashboard in React and WebSockets where users view the camera feed, drive the servos by keyboard, and manage authentication for secure remote access.

TECHNICAL SKILLS

Languages: Python, C++, TypeScript/JavaScript, SQL

Frameworks & Infrastructure: React.js, Node.js, FastAPI, Firebase, Docker, Kubernetes/OpenShift, Linux, Git, CI/CD

AI/ML & Specialized: MCP, LLMs (OpenAI/Claude), OpenCV, DeepFace

AWARDS

12 first-place and 5 top-3 finishes across 20+ hackathons, including HackHarvard (Truth & Trust track), NexHacks at Carnegie Mellon (Best Design), Hack Western (2nd), and QHacks at Queen's (2nd).