

# Jake Richardson

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## WORK EXPERIENCE

### IBM Canada

May 2019 – Present

Toronto, ON

*Full Stack Developer | May 2021 - present*

- As lead developer, I spearheaded the end-to-end development lifecycle of seller support application including initial architecture design, development of frontend and backend systems and internal marketing.
  - Application directly enhanced seller's ability to generate revenue through more effective lead generation. This allowed new sellers to generate 30% more leads than those who didn't use the application.
  - Marketed the application to multiple markets and grew app usage to 3000 internal sellers.
  - Developed Chrome extension addon that adds customization, including programmable shortcuts.
  - Created prompt generator feature that allowed users to create detailed prompts quickly, to be used in Microsoft copilot and create high level outreach messages.
  - **Tech stack:** Chromium, Angular, Nest.js, MongoDB, Microsoft Copilot. Chrome Extension API.
- Engineered LLM Chatbots for 6 applications, using state-of-the-art LLM models and RAG.
  - Implemented RAG for each chatbot using vector graphs and embeddings on related documents.
  - Reduced time spent answering repeated questions, freeing up administrators to focus on the event.
  - Tech stack: Watsonx.ai, llama-3-3-70b, PyTorch, OpenAI API.
- Built live events application to host events and user interactions for over 20k concurrent users.
  - Using sockets, sent live interactions to users and gathered and displayed user responses, additionally switched user sessions and videos live during events.
  - Eliminated third-party vendor dependency, saving \$40 000+ on licensing fees. Also providing customizable interface and rapid development of new features that would normally cost a premium.
  - Achieved successful adoption with 4 events annually moved from third parties to the platform.
  - Improved data security and operational control while removing per-user pricing constraints.
  - Tech stack: Chromium, React, Socket.io, Nest.js, MongoDB, Redis.

*System Skills Developer co-op student | May 2019 – May 2021*

- Prior to being hired Full-time after university, developed the frontend systems for a content management and scheduling platform
  - Connected multiple APIs, providing 1-click solutions to previously multi-step problems.

### LSI Control Systems Integration Canada ULC

June 2015 – Sept. 2019

Aurora, ON

*Engineering Intern*

- LSI Control Systems Integration specializes in advanced technologies and software for industrial automation.
  - Going on site with engineers to help estimate project budget Creating electrical panels from schematics.

## EDUCATION

### Carleton University

April 2022

Ottawa, ON

*Bachelor of Computer Science Honours, Major with a Minor in Business*

- **Relevant Coursework:** Machine Learning, Database Systems, Data Structures, Algorithms,

## CERTIFICATIONS, SKILLS & INTERESTS

- **Certifications:** AI Engineer Core Track: LLM Engineering, RAG, QLoRA, Agents, Gold Brandon Hall Award in Sales Enablement Technology, Published document [Game On: A Sales-Enablement Gamification Platform](#)
- **Skills:** Git, User adoption, Embeddings & Vector search, DevOps, Communication & Collaboration, UI/UX design, CI/CD pipelines, Project management and architecture design, Agile Methodologies, Debugging.
- **Technologies:** LLMs, Java, Angular, React, SQL, MongoDB, Node.js, Next.js, OAuth, Cloud hosting, Docker.
- **Interests:** Self-hosting, Wood whittling, Kayaking, Building computers, Running.