Jake Richardson

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WORK EXPERIENCE

IBM Canada   **May 2019 – Present**
Full Stack Developer | May 2022 - present   *Toronto, ON*

- 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.
    - Reduced time spent answering repeated questions, freeing up administrators to focus on the event.
    - Implemented RAG for each chatbot to answer questions specific to its intended application.
    - 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 2022

- 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**
Engineering Intern   *Aurora, ON*

- LSI Control Systems Integration specializes in advanced technologies and software for industrial automation.
    - Creating electrical panels from schematics saved over $2000 each summer.

EDUCATION

Carleton University   **April 2022**
Bachelor of Computer Science Honours, Majors with a Minor in Business   *Ottawa, ON*

- **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, Embeddings and Vector search, GraphQL, DevOps, Communication, Collaboration, UI/UX design, CI/CD pipelines, Project management, Agile Methodologies, Marketing, Debugging.
- **Technologies:** Chromium, LLMs, Angular, React, C++, MongoDB, PyTorch, Node.js, Next.js, Cloud hosting.
- **Interests:** Self-hosting, Wood whittling, Kayaking, Building computers, Running.