

JOSHUA WADE

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EDUCATION

B.A.Sc - Computer Engineering and Applied Mathematics, with Professional Internship

Queen's University

📅 Sept 2016 - May 2021

📍 Kingston, Ontario

EXPERIENCE

Full Stack Software Developer

Disco Education

📅 Sep 2023 - Present

📍 Toronto, Ontario

- Designed, developed and shipped custom AI response system using fine-tuned LLMs, internet search and Adaptive RAG. Implemented AI process parallelization, reducing response times by 75% and costs by 58% while response improving quality.
- Developed and shipped user content reactions feature, implemented reactions data tracking and analytics reporting with end to end and integration tests.
- Led AI innovation initiatives, establishing an internal learning community. Conducted R&D on LLM and process automation systems, significantly advancing company's AI capabilities and fostering continuous improvement.

Engineering Consultant

Stroud International

📅 Sep 2021 - August 2023

📍 Calgary, Alberta

- Led design working sessions to identify and develop opportunities to optimize project scope, reducing capital expenditure by \$300M+ for a clean hydrogen fuel production facility.
- Developed major logistics assessment and scheduling tools for the execution of a multi-million-dollar floating production storage and offloading vessel refurbishment project, reducing project delays by over a month.
- Led an improvement team to reduce downtime on two manufacturing lines by 35% over 8 weeks by identifying and implementing mechanical improvements and developing standard operating procedures.

Software Developer

Centre for Advanced Computing

📅 May 2019 - Nov 2020

📍 Kingston, Ontario

- Led a team of junior developers in the successful four-month development and launch of a mental health startup's web platform. Utilized Agile methodologies for iterative scope adjustment, exceeding client expectations and minimizing cost.
- Directed the design and full-stack development of a pilot AI-driven academic web platform, using React, Node.js, Docker, and Kubernetes, and integrated with IBM Watson and custom built quiz generation and tutor responses.
- Optimized and implemented natural language processing algorithms using Python for an NLP research project focused on the Mohawk language, integrated into a React application.

Chief Technical Officer

Queen's Space Engineering Team - Satellite Project

📅 April 2020 - May 2021

📍 Kingston, Ontario

- Led a team of 35 undergraduate engineering students in designing and building a micro satellite (CubeSat).
- Designed and developed a real-time satellite reaction wheel orientation control simulation with Simulink and MATLAB.
- Presented design plan at the Canadian Satellite Design Challenge, Critical Design Review 2019.

ADDITIONAL INFORMATION

- Programming: Python, TypeScript/JavaScript (Node, React), CSS, HTML, Java, C, C++, VBA
- Tools: Git, Docker, LangChain/LangSmith, GPT, Stable Diffusion, LLMs, MATLAB, Simulink,
- Winner - Bose AR App Development at BostonHacks 2019, Secure IoT Hackathon 2020 - Pill-O-Talk product design
- Interests - Generative AI, Information Theory, Digital Education, Process Automation, AI Ethics
- Languages - English: Native (ILR Level 5), French: Professional Proficiency (ILR Level 4), learning Mandarin