Benjamin Mah

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EDUCATION

University of Toronto, *Bachelor of Applied Science in Engineering Science* **September 2021 – April 2025**

Major in Machine Intelligence Engineering with Minor in Engineering Business

Relevant Courses: Introduction to Machine Learning, Foundations of Computing, Data Structures & Algorithms, Digital Systems

SKILLS

Languages: Python, C, Java, JavaScript, SQL, MATLAB, SystemVerilog, RISC-V/Assembly, HTML/CSS
Frameworks: LangChain, Agile, Flask, React.js
Libraries/Tools: OpenAI, Gradio, ROS, MAVLink, CAD, Matplotlib, Pandas, Git, NumPy, AWS

EXPERIENCE

Cohere **September 2023 – Present**
Data Analyst *Toronto, Ontario*

- Auditing machine learning data, revising errors, boosting accuracy by **15%** while optimizing data processing.
- Collaborating with cross-functional teams, including data engineers, to ensure data accuracy, completeness, and consistency, achieving a **98%** accuracy rate and facilitating LLM model refinement and reliability.

Royal Bank of Canada (RBC) **May 2023 – August 2023**
Machine Learning Engineer Intern *Toronto, Ontario*

- Worked within the Generative AI team within RBC's Technology and Operations Innovation Labs.
- Developed a machine learning application using semantic search, parallel processing, and prompting techniques to parse, chunk, embed, match, and respond to user questions on financial libraries in both IR and EQA.
- Used Python, LangChain, Qdrant, Amazon S3, and OpenAI models to boost accuracy and efficiency by **67%.**

University of Toronto Aerospace Team **September 2022 – April 2023**
Autonomous Aircraft Software Engineer *Toronto, Ontario*

- Responsible for developing and constructing an electric radio-controlled aircraft, an autonomous landing aircraft, and a payload ground rover for the SAE International Aerospace Competition in Texas.
- Programmed a Python script paired with a MavLink and ROS publication-subscription message system to autonomously land an aircraft on a target, improving success rate by **75%** upon jettison.
- Developed search algorithms and optimized flying parameters to be used with LiDAR sensors.

FlipDoor **March 2022 – April 2023**
Co-Founder *Toronto, Ontario*

- Co-founded a startup focused on implementing a mobile application using AI algorithms to improve pairing with landlords and tenants through the UofT Hatchery, a competitive startup incubator.
- Principal software engineer using MERN stack and data wrangling to build Tinder-like machine learning algorithm for the rental market, increasing client satisfaction rate by **55%** from conducted surveys.
- Created Figma mockups, conducted market research, and presented business pitches to investors with a projected yearly revenue of **$100,000** nationwide and awarded with **$10,000** in funding.

PROJECTS

Dubu Chatbot | *Python, JavaScript, HTML, CSS* **June 2023**

- Designed an intuitive chatbot with user-friendly features, including tone customization and PDF uploads.
- Used ChromaDB, ada-002, and GPT-3.5 for precise semantic search and expert response generation.

MoodPalette | *Python, JavaScript, HTML, CSS* **June 2023**

- Created an art therapy application that uses Meta's DeepFace facial recognition system to intelligently determine the user's mood from real-time images, dynamically changing the color palette and art prompt.

Smart Farming Trailer | *Python* **January 2023 - May 2023**

- Led the development of a smart farming trailer for rural Ugandan farmers, incorporating code and circuits to collect and process data, offer real-time farming suggestions, and integrate GPS, sensors, LCD displays, and joystick controls using Raspberry Pi Pico-based systems.

ADDITIONAL INFORMATION

Awards: Dean's List (2021, 2022, 2023), CEMC Certificate of Distinction ×4, President's Scholarship of Distinction (Declined)
Interests: Music Production, Basketball, Taekwondo, Music Production, Record Collecting, Studio Ghibli Films