

# Patrick Molka

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Seeking co-op/internship opportunity beginning May 2025.

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## Experience

**Backend Developer**, *DBAC-Gym Companion App – Hamilton, ON* September 2024 – April 2025

- Worked in an 8-person SCRUM team to develop a full stack React Native app, scaled to accommodate 40,000+ users.
- Developed and documented REST APIs with axios for secure data exchange and smooth client integration.
- Architected and implemented a scalable friend system in Firestore, through efficient data modeling, optimized query strategies, and real-time synchronization, ensuring low latency and robust performance.
- Dockerized the backend and deployed it to Google Kubernetes Engine (GKE) for scalable, containerized cloud hosting.

**Software Developer - Contractor**, *Broker's Playbook – Toronto, ON* April 2025

- Built a spreadsheet parsing tool in Python using Pandas and added Google Sheets compatibility by integrating OAuth.
- Developed CRUD functionality with Python and AWS DynamoDB via boto3, integrating with Lambda and API Gateway.

**Swim Coach**, *Jack of Sports – Toronto, ON* September 2021 – August 2024

- Designed and supervised customized lesson plans to boost swimmers' confidence, skills, and overall performance.
- Assessed swimmers' progress, providing strategic feedback to both students and staff for continuous improvement.

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## Projects

**TrueDermis**  | February 2025

- Led a team of six interdisciplinary students in the research and development of a full-stack healthcare web app.
- Trained a machine learning model following a research paper using Tensorflows Keras and Google Colab.
- Implemented Docker to containerize the backend and simplify hosting and deployment to AWS using Elastic Beanstalk.
- Tools Used: Python, Google Colab, Tensorflow, Docker, Next.js, Typescript, Express.js, axios, Trello(Kanban).

**Git Tissues**  | February 2025

- Wrote back-end logic for a project management tool powered by OpenAI at ConUHacks IX against 800 competitors.
- Built REST APIs with appropriate error handling and tested them with Postman for reliable bug-free performance.
- Wrote GraphQL queries with Apollo server for efficient data retrieval from GitHub's API and optimized performance.
- Tools Used: Typescript, Express.js, Postman, GraphQL, REST APIs, axios, node.js, OpenAI.

**GateKeeper**  | December 2024

- Collaborated in a 4-person team to develop and maintain a local encrypted password app using a CI/CD pipeline.
- Created a Bash testing script and YAML workflow using GitHub Actions to automate testing and upload results.
- Wrote SQL queries to store and manage encrypted databases, ensuring data security, integrity, and efficient retrieval.
- Tools Used: C, OpenSSL, YAML, BASH, SQL, Github Actions.

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## Education

**Mcmaster University**, B.Eng Software Engineering Co-op. GPA: 3.6/4.0 Sept 2023 – May 2027

- **Awards:** Engineering Award of Excellence, Dean's Honour list.
- **Coursework:** Software Design, Object Oriented Programming, Data Structures and Algorithms.

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## Skills

**Languages:** HTML/CSS, JavaScript(React), C, Python, Java, SQL, Typescript, LaTeX, Bash, MATLAB, YAML, Verilog.

**Technologies/Frameworks:** Firestore, Firebase, Node.js, Linux, Kubernetes, Docker, Git, TensorFlow, PyTorch, Matplotlib, Next.js, VertexAI, FPGA, Quartus Prime, ModelSim, Postman, GraphQL, Apollo.

**Dev Tools:** GitHub, VS Code, Canva, Figma, Eclipse, IntelliJ, PyCharm, Drawio, Trello, VIM.

**Additional Interests:** Hackathons, DevOps, Cloud Infrastructure, Reading, 3-D modeling, Piano, Rock Climbing.