

Patrick Molka

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EDUCATION

McMaster University

Hamilton, ON

Bachelor of Engineering, Software Engineering Co-op; GPA: 3.6/4.0

September 2023 – April 2027

Courses: Object Oriented Programming, Data Structures and Algorithms, Software Design.

EXPERIENCE

Software Developer Intern

March 2025 - May 2025

Playbook International Media Corp.

Remote, ON

- Built an ETL pipeline in Python to clean and normalize data records into a uniform schema.
- Developed a Selenium- and BeautifulSoup-based scraper to automate the extraction of 200+ dynamic web tables.
- Engineered a custom header-mapping framework using a Word2Vec similarity model and interactive prompts to standardize 30+ key phrases, achieving over 90% accuracy in mapping inconsistent column names across sources.
- Deployed data into Amazon RDS (PostgreSQL) via SQLAlchemy-powered loads, centralizing all 200+ spreadsheets into a managed relational database and eliminating manual CSV imports.
- Streamlined data quality and maintenance by versioning header mappings in JSON and retraining the Word2Vec model on new mappings, ensuring the system adapts to evolving source formats.

Backend Developer

September 2024 – April 2025

DBAC-Gym Companion App

Hamilton, ON

- Worked in an 8-person SCRUM team to develop a full-stack React Native app accommodating 10,000+ users.
- Built REST API endpoints in TypeScript for secure data exchange and smooth client integration.
- Dockerized backend APIs and deployed to Google Kubernetes Engine for scalable, containerized cloud hosting.
- Architected and implemented a scalable friend system in Firestore, through efficient data modelling, optimized query strategies, and real-time synchronization, ensuring low latency and robust performance.
- Utilized version control with Git, leveraging GitHub pull requests for structured code reviews and merges.

PROJECTS

🔗 Git Tissues | *Postman, GraphQL, Node.js, Express.js*

February 2025

- Developed a project management tool powered by OpenAI at ConUHacks IX against 800+ competitors.
- Built Node.js REST APIs with robust error handling and Postman-tested them for reliable, bug-free performance.
- Wrote GraphQL queries using Apollo Server to fetch data from GitHub's API, optimizing retrieval performance.
- Integrated OpenAI's APIs to run prompts and retrieve AI responses, streamlining content workflows.

🔗 TrueDermis | *Tensorflow, Amazon Web Services, Flask, Trello(Kanban), Google Colab*

April 2025

- Led a team of six interdisciplinary students in the research and development of a full-stack healthcare web app.
- Built a React UI with Axios to call Flask REST APIs, driving a .h5 skin disease classification model.
- Architected the Flask backend to securely fetch the classification model from an AWS S3 bucket at startup using Boto3, ensuring versioned model management and reducing local storage dependencies.
- Trained machine learning model using Tensorflow and Jupyter Notebooks, handling data prep and augmentation.

🔗 GateKeeper | *C, OpenSSL, YAML, BASH, SQL, GitHub Actions*

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 encrypted passwords, ensuring data security, integrity, and efficient retrieval.
- Integrated OpenSSL to generate salts, AES-256 keys, and initialization vectors for secure encryption workflows.

TECHNICAL SKILLS

Languages: Java, Python, C/C++, SQL (Postgres), JavaScript, TypeScript, HTML/CSS, Bash, YAML

Frameworks: React, Node.js, Flask, Selenium, REST, Expo

Developer Tools: Git, Docker, Amazon Web Services (AWS), Google Cloud Platform (GCP), Docker, Kubernetes

Libraries: Pandas, NumPy, Matplotlib, Tensorflow, BeautifulSoup