Ben **Hepditch**

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Education

McGill University — *Montreal, Quebec*

B.A. & Sc, Double Major in Computer Science - Artificial Intelligence & Urban Studies — *Sept. 2020 - April. 2025 (Expected)*

- **Certifications:** Canadian Securities Course, Canadian Securities Institute

Skills

Programming	Python, Java, C,C++, Ocaml, Bash, TypeScript, MIPS Assembly, SQL/NoSQL
Libraries & Frameworks	PyTorch, TensorFlow, Scikit-learn, Pandas, ROS, React, Django, Flask, Keras, Node.JS, NestJS
Tools	Microsoft Office, Unix, Git, Docker, AWS CDK, AWS API Gatway, AWS Lambda, AWS Glue, AWS Athena, DynamoDB

Work Experience

Amazon Web Services (AWS) — *May - July. 2024*

Software Development Engineer Intern — *Python | TypeScript*

- Successfully developed and delivered a full-stack application to enable 20+ products in AWS finance to serve their customers more effectively
- Owned the development of a new programming language grammar, saving finance & development teams hundreds of hours per month
- Engineered a micro-service architecture with a NestJs TypeScript backend, React frontend, REST API, and AWS Athena & Glue for data processing
- Won people's choice award for producing a generative AI tool to automate customer tasks at the AWS Fintech hackathon

Openfood.AI — *September 2023 - December 2023*

Machine Learning Engineering Intern — *PostgreSQL | Python | Keras*

- Developed and delivered a simple ETL and recommendation pipeline for a consumer-facing startup
- Leveraged GPT-3.5 API, PostgreSQL, and Apache Airflow to gather, standardize, and classify over +100k ingredient data points
- Deployed deep learning models built with Keras on AWS SageMaker and designed a RESTful API for real-time recommendation serving

Independent Robotics — *May - August. 2023*

Software Engineering Intern — *Python | C++ | ROS2| Docker*

- Designed a robust, end-to-end text-to-speech pipeline optimized for real-time operations, harnessing the power of ROS2, Python, and PyTorch
- Analyzed geodetic time series data using advanced statistical tools in Pandas and sk-learn to evaluate the performance of predictive models
- Integrated drivers for mission-critical sensors and segmented displays into the robot's localization stack using C++ and ROS2

Valsoft Corporation — *May - Aug. 2022*

Mergers & Acquisitions Intern — *Excel | Power BI*

- Developed financial models in Excel, analyzing potential acquisitions for alignment with Valsoft's acquisition strategy.
- Conducted due diligence for acquisition targets, evaluating over $100 million in assets and identifying potential risks and synergies.
- Headed an overseas research team, optimizing due diligence and target identification for 6 M&A groups.

Lennox Mcneely — *May - Aug. 2021*

Equities Analyst Intern — *Python | Pandas | Matplotlib*

- Analyzed and reported on small-mid cap IT companies listed on the TSX and TSXV, in addition to passing the Canadian Securities Course
- Produced charts of time-series data from TR Eikon with Excel and Python to gauge the 5-year performance of prospective securities
- Achieved an average 3 month portfolio return of 18.3% over 3 months and outperformed the S&P 500 by 11% over the same period

Academic & Extracurricular Experience

McGill Robotics — *Sept. 2020 - Present*

Project Manager — *Excel | PowerPoint*

- Led a multidisciplinary team of 50+ engineering students to a top 15 position at the RoboSub 2023 Autonomy Challenge
- Procured over $60k in funding to create an AI tool to assist McGill's research with monitoring underwater invasive species
- Executed an efficient development strategy, producing a brand new mechanical design, 5 PCBs, and 6 software packages in less than 8 months
- Coordinated 100+ structured meetings throughout the academic year, facilitating in-depth design reviews and aligning stakeholder requirements

Mobile Robotics Lab (McGill University) — *Jan - April. 2023*

Research Assistant — *Python | ROS2 | Bash*

- Analyzed the performance of an autonomous robot on searching, tracking, and recovering divers amidst low-visibility ocean conditions
- Co-designed the machine learning pipeline enabling a reinforcement learning agent using tools such as Python, PyTorch, ROS2, and Bash
- Developed computer vision models capable of detecting scuba divers in both the ocean and in simulation using YOLO v7, achieving above 0.92AP