Ahmed Nami

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A motivated individual with in-depth knowledge of programming, Machine Learning, and Embedded Systems. Passionate about problem solving, leadership, and continuous learning.

Education

McGill University — Montreal, QC **September 2020 - Present**
Bachelors in Honours Electrical Engineering, Minor in Software Engineering *Expected Graduation: Winter 2025*

- **Relevant Coursework:** Applied Machine Learning, Deep Learning, Object Oriented Programming, Embedded Systems, Microprocessors, Model Based Programming, Computer Organization, Electronics

Skills

Programming Languages: **Python**, Java, Javascript, C, ARM Assembly, SQL, MongoDB, HTML/CSS
Technologies: Linux, Unix, Bash, Git, PyTorch, Tensorflow, Keras, Django, MLflow, Docker
Spoken languages: English (Native), French (Limited working proficiency)

Work Experience

Aircraft System Software Intern **May 2024 - Dec 2024**
CAE Inc. *Montreal, QC*

- Developed and integrated simulation software for aviation systems, within an Agile software engineering team.
- Programmed aircraft system simulations using C, C++, JAVA, focusing on enhancing system performance.
- Implemented and optimized flight control algorithms, applying principles of OOP and UML for system architecture design.

Research Intern - Machine Learning **August 2023 - December 2023**
Computer Networks Research Lab under Prof. Mark Coates *McGill, Montreal, QC*

- Participated in research on dynamic neural networks (DyNN), focusing on early exit behavior. Assisted PhD candidates on implementing DyNN on T2T vision transformers.
- Conducted experiments on T2T-ViT-7 and T2T-ViT-14 models, compiling results in a 7-page report contributing to a research paper.

Electronics Project Lead **August 2023 - Present**
Payload Subteam, McGill Rocket Team *McGill, Montreal, QC*

- Led and mentored a team of six recruits to design a specialized PCB integrating STM microcontrollers.
- Trained new members on software tools and organizational practices; contributed to securing **2nd place at Launch Canada 2023**.

Undergrad Honours Thesis

Machine Learning for Optimizing Causal Graphs **Jan 2024 - Present**
McGill University *Montreal, QC*

- Refined and customized the GRouNdGAN model to simulate biological perturbations in scRNA-seq data.
- Enhanced predictive accuracy by integrating diverse datasets and optimizing ML algorithms on HPC resources.
- Contributed to biological research by predicting drug responses, reducing lab experiment reliance.
- Automated data preprocessing pipelines, improving scalability.
- Presented research poster at McGill University.

Projects

Deep Learning Model for Fantasy Hockey Prediction — *Python, PyTorch, LSTM* **April 2024**

- Developed an LSTM-based model to predict NHL player/team performance for fantasy hockey pools.
- Outperformed traditional models in RMSE; implemented custom data loaders to manage seasonal data.

NutriPapi: Diet Management Web App — *Django, React.js, SQL* **April 2024**

- Built a full-stack web app for diet tracking and weight goal management.
- Developed the frontend in React and backend in Node.js, integrated SQLite for data management.

Leadership & Interests

President, PSA McGill | **Sports:** Intramural Soccer and Cricket | **Hobbies:** Powerlifting, Swimming