Benjamin Curis-Friedman

438-346-5109 | benjamin.curis-friedman@mail.mcgill.ca | linkedin.com/in/benjaminc-f | github.com/benjamincf0 | bencf.dev

EDUCATION

McGill University   Montreal, QC
Bachelor of Software Engineering COOP   4.0 GPA   *Aug. 2024 – May 2028*
  Awards (6000$): Alma Mater Entrance Scholarship, Class of Engineering '83 Scholarship

Stanford Online
Machine Learning Specialization by Andrew Ng.   100% Grade   *May 2025 – August 2025*
  Covering regression, deep-learning, random forests, and ML engineering practices.

EXPERIENCE

Artificial Intelligence Intern   May 2025 – Present
iSMART AI Lab   *Montreal, QC*
- Developed a video synchronization & compression library using FFmpeg and OpenCV to prepare for training.
- Coded a data pre-processing pipeline to clean raw human vital signals for machine learning models.
- Built and programmed a task labeling device using Arduino and C++ to split recording segments appropriately
- Created a high quality multi-modal dataset of over 50 hours of recordings from dozens of study participants.

Robotics Club - Drone   Sep. 2025 – Present
McGill University   *Montreal, QC*
- Training a YOLO model to detect targets and drop payloads over.
- Developing software to control an autonomous drone using ROS2.

PROJECTS

AI Library From Scratch | *Python, NumPy, TensorFlow, Keras, PyGame*   June 2025 – July 2025
- Created a NN library complete with mini-batch gradient descent and activation/cost functions.
- Trained a sequential neural network achieving $\sim$96% test accuracy on MNIST dataset.
- Implemented customizable network and layer shapes for enhanced flexibility and scalability.
- Visualized inference with an interactive real-time digit recognition game using PyGame.

Differential Equation Simulator | *Javascript, HTML*   June 2025 – July 2025
- Created a web based simulation of harmonic motion.
- Programmed a visualizer and phase diagram to observe the motion of a pendulum.
- Implemented a user friendly way to set the initial conditions by clicking on the phase diagram.

ArduCar | *Arduino, C++*   February 2024 – October 2023
- Built a bluetooth remote controlled car using arduino
- Designed the vehicle's body using Fusion360 to prepare for manufacturing
- Developed a motion activated controller for intuitive control using tilt sensors

WarHacks Hackathon | *Arduino, C++*   January 2024
- Engineered a fully autonomous vehicle using Arduino.
- Developed a program to follow a designated path in C++.

Web Chat Application | *Firebase, Javascript, Vue.js, HTML/CSS*   October 2022 – October 2023
- Developed a full-stack web messaging platform with authentication to message friends.
- Programmed search and adding friends features with Cloud Functions.
- Implemented Firestore security rules to ensure secure communications.
- Hosted live website on a custom domain to make it easily accessible.

SKILLS

Languages: Python, Java, Bash script, C, C++, Typescript, JavaScript, HTML/CSS, R
Frameworks: Next.js, React, Node.js, JUnit, Tailwind
Developer Tools: Git, Docker, Google Firebase, VS Code, NeoVim, Linux
Libraries: NumPy, Matplotlib, OpenCV, pandas, SciPy, Keras, TensorFlow
Spoken Languages: English, French