Andre Boufama

(603) 285-5685 andre.boufama@gmail.com Portfolio - https://aboufama.github.io/website/

Education

- Cornell University, B.S. Mechanical Engineering (Minor: Aerospace Engineering)   *Expected May 2027*

                                                                                                                                        GPA: 3.91

Skills

- Programming: Python (5 yrs), C/C++ (3 yrs), Javascript, ReactJS (2 yrs), Docker (2 yrs), API frameworks (3 yrs)
- CAD 3D design: Fusion 360 (6 yrs), Blender (4 yrs) - see my designs: https://aboufama.github.io/website/
- Aerospace: VTOL UAV and Quadcopter build experience, ROS2 on Linux
- Data Engineering: Azure SQL, Jupyter Notebook, Pandas + Data Analysis and Inferential Procedures, Microsoft PowerBI, Microsoft Power Apps

Work Experience

Data Engineer Intern at Taylor Fresh Foods   *July 2024 - May 2025*
- Programmed Microsoft Powerapps functions through Databricks to optimize energy efficiency and collect environmental   data for more efficient warehouse energy partitioning
- Co-developed with Walmart automatic intercompany document parsing/routing system using Microsoft Powerapps
- Trained multiplatform genAI RAG for internal indexing using Databricks data lakehouse and deployed company wide for internal testing, presented for senior leadership

LoRaWAN Robotics Swarm Control Research, University of New Hampshire   *June 2022 - August 2023*
- Designed and implemented a LoRa based swarm communication prototype for drones and ground robots; presented poster at New Hampshire EPSCoR Summer STEM Symposium and at IEEE MIT Undergraduate Research Technology Conference

AI Summer Camp Counselor, EPIC robotic programming camp   *July 2021 - August 2025*
- Trained 6DOF robot arms using Nvidia Groot N1 foundation model and ran imitation learning demonstrations
- Designed coding and AI focused curriculum and robotics activities for middle schoolers; led classroom instruction and supervised five camp volunteers and 200+ campers.

Camp Counselor, Camp Horizons   *June 2025 - August 2025*
- Supported 24/7 campers of all ages with developmental disabilities to provide a classic summer camp experience

Customer service, McDonald's   *May 2023 - July 2024*

Personal Projects and Clubs

- Founder and President of Cornell Aerial System Club, designing and running simulations of novel aerial drone designs
- Lead engineer at the Cornell Laparoscopic Surgery club designing and manufacturing training tools for non invasive surgery techniques pioneered by organization founder Dr. James Rosser
- Designed and programmed an all terrain rover, presented at IEEE MIT Undergraduate Research Technology Conference
- Designed and programmed a large-scale CoreXY FDM 3D printer to high school makerspace and trained staff
- Programmed a fine tuned LLM running on OpenAI API to act as a teaching tool for middle schoolers, including voice to voice pipelines, procedurally generated facial expressions based on vector emotion mapping, and interface with robotic hardware

Awards

- U.S. Presidential Scholar (one of five finalists in the state)
- Modular Hydroponics System, won First Prize Award in Autodesk "Green Future Student Design Challenge" (https://aboufama.github.io/website/), Top 50 Autodesk Instructables of 2024
- Overpass Oasis Suspension Bridge, First Prize Award, Autodesk "Make it Bridge" Design Challenge (https://aboufama.github.io/website/)