Micol Altomare

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Education

University of Toronto **September 2021 – April 2025**
Bachelor of Applied Science in Engineering Science + PEY Co-op *Toronto, Canada*
Major in Machine Intelligence, Minor in Business

Relevant Coursework: Computer Algorithms & Data Structures (C), Digital & Computer Systems (Assembly, Verilog), Molecules & Materials, Thermodynamics, Fluid Mechanics, Introduction to Physiology, Probability & Statistics

Technical Skills

Languages: Python, C, MATLAB, Dart, SystemVerilog, Assembly (RISC-V)
Libraries & Frameworks: NumPy, Pandas, PyTorch, TensorFlow, Biopython, Matplotlib, Flutter

Professional Experience

Garton Lab (UofT Institute of Biomedical Engineering, IBBME) | *Research Assistant* **Summer 2022**
- Analyzed and pre-processed a dataset of 10 000 HeLa cell proteins and tested models with Uniprot and Biopython tools.
- Designed a convolutional neural network model to predict protein degradation rate based on primary sequence to inform protein design, ultimately achieving 30% accuracy.

Tunescape (Startup) | *Co-Founder* **Summer 2022**
- Developed the first prototype and marketing strategy for a feature-based music recommendation platform.
- Participated in Hatchery NEST incubator program, presenting at DEMO Day in the top 9 teams out of 170 applicants.

Tracery Ophthalmics Inc. | *Medical Data Annotator* **March 2020 – August 2020**
- Annotated and segmented thousands of FAF and OCT images in efforts to train neural networks to better recognize and predict age-related macular degeneration (AMD) under the supervision of Dr. Shelley Boyd and Dr. Nehad Hirmiz.

Extracurriculars

UTAT Unmanned Aerial Systems Team | *Propulsion Team Engineer* **September 2022 - Present**
- Automated propeller-motor selection with various parameters using MATLAB to optimize propulsion efficiency for a primary aircraft (PA) and powered autonomous delivery aircraft (PADA) in preparation for the international SAE Aero Design (Advanced Class) competition.

UofT Biomedical Engineering Design Team (UTBIOME) | *Computational Team Member* **August 2022-Present**
- Collaborating with a rheumatologist of the University of Calgary to design a machine learning model for the analysis of functional genes for rheumatoid arthritis.

Division of Engineering Science @ UofT | *Technical Assistant/Volunteer* **January 2022-April 2022**
- Moderated a fireside chat with aerospace speaker Miguel Ayala, facilitating expert-with-student dialogue as part of the Engineering Science Education Conference (ESEC) for 550+ students.
- Engaged with prospective Engineering Science students at UofT engineering welcome events of 200+ attendees.

Projects

Happy Hours: Effortless Social Event Planning | *Hack the North @ UWaterloo* **September 2022**
- Designed and implemented a natural-language processing (NLP)-based web app using Google Maps and Cohere APIs in a team of 4 software developers in under 36 hours.

Detecting Key Parameters in Heart Disease | *Daisy Intelligence Hackathon at UofT* **January 2022**
- Developed a logistic regression model that was able to detect the most significant indicators of cardiovascular disease out of a set of 76 health-related factors using Pandas and Scikit-Learn in Python.

Awards

University of Toronto Engineering Kompetition (UTEK) Junior Design Category Finalist **January 2022**
- Placed in the top 5 of 1st- and 2nd-year teams for an efficient and versatile simulated waste management system.

University of Toronto Dean's Merit Award **February 2021**
- $ 5000 Faculty of Engineering entrance scholarship for strong academic excellence and extra-curricular involvement.

NSSF Award of Recognition **June 2021**
- Awarded for strong involvement that reflects positively on the broader Northern S. S. community, such as arranging a talk with Toronto Mayor John Tory for politics students and organizing in-person and virtual concerts.

Schulich Leader Nominee **January 2021**
- Nominated for the Schulich Leader scholarship out of my class of 400+ students for entrepreneurial thinking, and outstanding academic, leadership and community achievement in STEM fields.

Duke of Edinburgh Bronze Award **June 2018**
- Awarded for personal and community growth through volunteering and honing my viola and swim performance.