

LIZA BABAUGLU

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[My Website](#) • [LinkedIn](#) • [GitHub Page](#) • [YouTube Page](#)

EDUCATION

University of Toronto (UofT), Faculty of Applied Science and Engineering, Toronto, ON.

B.A.Sc. Electrical and Computer Engineering (Year 4)

Minor in Robotics and Mechatronics, Certificate in Engineering Leadership

Cumulative GPA: 3.63/4.00

Expected Graduation: May 2024

Relevant Courses: Programming Languages (C/C++/Python); Engineering Strategies & Practices; Digital Systems; Computer Organization; Electrical Fundamentals; Machine Learning; Robot Modelling and Control; Software Design

Awards: Dean's Honours; Leadership Award; Mind Olympics Finalist; Math and Chess Awards;
50+ international/provincial/regional sports medals.

Scholarships: Dean's Merit Award; Faculty of App. Sci. and Engineering Admission; Barbara Mcann Tribute.

Island Air, Flight School and Charters, Toronto, ON.

2022 - 2023

Private Pilot License

PROFESSIONAL EXPERIENCE

Software Engineer PEY Co-op Intern at **Intel Technology Canada**, Toronto, ON and San Jose, CA May 2021 – Aug 2023

- Worked in Toronto's Software Program Management Team (hybrid) and San Jose's Quartus Compiler Release Team (remote) under the Programmable Software and Solutions Group within the Data Centre and Artificial Intelligence unit.
- Prepared high-level technical workflows and documentation for Firmware/Configuration, Timing and Modeling, and Embedded Software teams showcasing the upstream and downstream dependencies to facilitate understanding among cross-functional stakeholders and new hires.
- Drove dashboard maintenance and division-level initiatives such as risk, validation, and bug tracking for FPGA devices.
- Automated engineering teams' scheduling and capacity Gantt Charts, and pipelined software program milestone dates with Python scripting, Microsoft Graph API, cron jobs, VBA Excel, and formulas.
- Analyzed and presented results on statistics and trends on regression tests, defects, change requests, technical requirements.
- Interacted with engineering owners and managers to drive the closure of release gating defects with utmost urgency.

Data/Software Engineer Coop at **Smart Nora**, Toronto, ON. (Remote)

May 2021 – Aug 2021

- Performed data wrangling and analysis to decipher meaning from metadata, quantitative tests and analysis.
- Built ad-hoc tools and interactive visualizations using Python, to transfer technical data into business decision pathways.
- Maintained and updated two iOS applications on Xcode and reviewed their audio and csv files on AWS S3.
- Conducted various consistency and performance-focused field tests to replicate customer experiences and to provide clarity on customer needs using a data-driven approach.

Academic Tutor at **PAPER**, Montreal, QC. (Remote)

Nov 2020 – Feb 2023

- Guided students in grades four to twelve in math, science, and computer programming.
- Assisted problem-solving and understanding of critical concepts via a one-on-one online texting and drawing platform.
- Examined academic problems, by asking them questions and helping them progress with the Socratic teaching method.

Research Intern at **Data Science Laboratory, Ryerson University**, Toronto, ON.

May 2020 – Aug 2020

- Conducted exploratory data analysis on vehicle collisions from Canada's National Collision Database (NCDB).
- Implemented data mining methodologies, and investigated key contributing factors that lead to fatalities.
- Utilized and tested supervised learning classification models to predict fatalities with more than 80% accuracy.
- Researched, and conducted literature review; wrote a technical research paper: "Prediction of Fatalities in Vehicle Collisions in Canada". Published in "Promet - Traffic & Transportation", a double-blinded peer-reviewed scientific journal.

Student Intern at **Toros Filtration**, Istanbul, Turkey.

July 2018 – July 2019

- Introduced, presented, promoted the company's original "Oil Purification System" to 100+ investors, engineers, sales representatives, and guest visitors in the Hannover Messe International Conference, Germany.

Other Experiences: Founder of LizDesign, Intern at Exceed Robotics; UofT Summer Camp Counselor; Math Tutor; Volleyball Coach.

PROJECTS

Towers of Hanoi Game (Team Project)

- Built the digital version of the Towers of Hanoi game on a ARMv7 DE1-SoC simulator, *CPULATOR*.
- Implemented multiple I/O devices, such as the VGA pixel buffer, PS/2 Keyboard, Seven-segment HEX Display, LEDs, Switches, Character Buffer, and ARM A9 Private Timer.
- Designed animations, and developed the game logic and its I/O components, using the *C programming language*.
- Added features, such as a recursive auto-solver, invalid move detector, and colorful introduction and win displays.

I AM - Inclusive and Accessible Map (Team Project)

- Built a Geographic Information System (GIS) software program, in *C++ programming language*, that displays and solves travel and optimization problems in maps of any city in the world.
- Utilized StreetsDatabase and OSMDatabase APIs to query a geographic information database about information such as street names, intersection locations, points of interests and features; and organize them into appropriate data structures.
- Drew multiple map features, such as streets, lakes, parks, restaurants, and allowed map navigation and interactions from the user through the EZGL graphics library.
- Developed unique properties for color blindness, and wheelchair accessibility to empower every person on the planet to achieve more.
- Implemented the (A*) path-finding algorithm and optimized the computationally hard travelling courier problem with Multi Destination Dijkstra algorithm and k-opt local search algorithm.

The Impacts of International, Domestic, and Local Mobility on COVID-19 Deaths (Team Project)

- Conducted data analysis on the collection of multiple open-source datasets in international health and tourism, using *Python, R, and Tableau*; presented using *LaTeX, Adobe After Effects, and Camtasia*.
- Wrote a research manuscript and performed a presentation on the National Undergraduate Big Data Challenge 2020.
- Selected as finalists, where our abstract was published in the STEM Fellowship Journal.

My Personal Website (Solo Project)

- Built and designed a unique, interactive, and dynamic website using *HTML, CSS, JavaScript, and GitHub*.

Game Development (Solo Projects)

- Built an original iOS application that receives an input - word, name, or a sentence - from the user in English and/or Armenian letters and displays a personality describing positive word for each letter in their respective alphabets, using *Swift, Xcode, and App Icon Generator*.
- Developed an algorithm for the Reversi game which can play against a human opponent, as well as a computer opponent (or itself), using *C programming language*.

Other Projects: Multiple team projects in biomedical engineering, wildlife, and environmental fields.

LEADERSHIP & AFFILIATIONS

Engineering Athletic Association (EAA), Toronto, ON

June 2020 – May 2023

Elected *President (Former Vice President Finance and Women's Director)*

- Oversaw the responsibilities of all council members, ensuring that all tasks were completed on time with integrity and quality.
- Constructed a mental roadmap of events, duties and deadlines to successfully lead sports games and team management; equipment, merchandise and locker distribution; financial auditing; external athletic events; and social celebratory events.
- Represented EAA in UofT's Club Fair and welcomed 1000+ first-year engineering students.
- Shared the vision of providing EAA's services to as many engineer athletes as possible.

University of Toronto's Aerospace Design Team (UTAT), Toronto, ON

Sept 2019 – Nov 2020

Space Systems – Active Member in both Mechanical Structures and Firmware Systems

- Researched technical requirements, vibration and shock test specifications, material and manufacturing methods regarding the structure of our 3U CubeSat ("FINCH"), which will be launched to space.
- Developed the watchdog timer on the STM32 CubeIDE.

Other Leadership & Affiliations: Team Leader and Project Manager of course projects; Intramural Volleyball Captain; Dragon Boat Team; Armenian Students Association Member; LiveGreen Volunteer; Angel Alert Emergency Volunteer.

SKILLS

Language: English (native), Armenian (native), Turkish (native).

Computer: Proficient in Python, C, C++, R, ARM, Swift, Xcode, MATLAB, Intel Quartus, HTML, CSS, JavaScript, STM32 CubeIDE, ModelSim, DE1-SoC, Arduino, LaTeX, Camtasia, Fusion360, Microsoft Graph API, VBA and Excel.