

# ADAM TABACK

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## EDUCATION

### University of Toronto

*B.A.Sc in Electrical and Computer Engineering*

September 2022 - May 2026

*cGPA: 3.92*

- **Relevant Courses:** Introduction to Computer Programming (Python): 96%, Data Structures and Algorithms (C): 100 %, Programming Fundamentals (C++/OOP): 92%, Digital Systems (Verilog, FPGA): 97%. Computer Organization (Assembly, C): 96%

## PROJECTS & RESEARCH

### FPGA Processor 🌀

Winter 2024

- Created a 16 bit processor in Verilog to run on a FPGA, with associated assembly language
- Wrote python parser to allow assembly code to be written and be compiled by processor

### Radio Receiver: Mixer and Preprocessing

Winter 2024

- Designed a fully functioning PCB in Altium for a radio receiver, specifically the Mixer and pre-processing filtering and amplification

### Synthesizer in Verilog 🌀

Fall 2023

- Created a musical Synthesizer using Verilog, that ran on an FPGA
- Generated square and sine waves, produced note based on keyboard input, modulated waves to produce ADSR, compression and overdrive effects, displayed visuals using VGA display

### Risk Stratification for Improved Preeclampsia Prediction 🌀

Summer 2023

*Data Science Research Intern with Professor Brian Cox*

*University of Toronto*

- Used unsupervised machine learning techniques to find subtypes of Preeclampsia and used Python to write a suite of functions to streamline workflow

## SKILLS

### Computer Languages

Python, C, C++, R, Verilog, Matlab, Java

### Operating Systems

Linux, Mac OS, Windows

### Packages

Scikit-Learn, TensorFlow, Keras, Pandas, Matplotlib

### Tools

Altium, High Performance Computing (HPC), Quartus, Modelsim, L<sup>A</sup>T<sub>E</sub>X,  
Github, Git, Microsoft Office (Word, Excel, PowerPoint, Outlook)

### Professional Skills

Collaboration, Problem Solving, Leadership, Effective Communication

## HONOURS AND AWARDS

- University of Toronto Excellence Award - HLS, 2023
- Dean's List Fall 2022, Winter 2023

## WORK EXPERIENCE

### Teaching Assistant

Fall 2023 - Winter 2024

*Introduction to Computer Programming (ESC180) & Data Structures and Algorithms (ESC190)*

- Ran weekly labs, helping students complete lab assignments and assessing their performance, Marked Midterm and Final Exam

## INTERESTS/COMMITMENTS

Food Bank Volunteer (Fort York Food Bank), Hart House Orchestra (Violin), Skule StageBand (Guitar), Bass Guitar, Running