ADAM TABACK

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EDUCATION

University of Toronto September 2022 - May 2026
B.A.Sc in Computer Engineering *GPA: 3.92*

· Introduction to Computer Programming (**Python**), Final Mark: 96%, Data Structures and Algorithms (**C**), Final Mark: 100%, Programming Fundamentals (**C++/OOP**), Final Mark: 92%, Introduction to Deep Learning (**Pytorch**), Final Mark: In Progress

PROJECTS

Inference Time Neural Compression using Asymmetric Numeral Systems Summer 2024

· Implemented Entropy Compression technique, Asymmetric Numeral Systems, in **Python**, using lookup tables
· Testing technique with compression of weights and inputs to speed up transfer of data from memory to CPU, using **Pytorch**

Image Generation using Generative Adversarial Networks Summer 2024

· Used **PyTorch** to develop a conditional GAN model to generate images of different species of animals

Using Machine Learning to Analyze Placentae Images for Preeclampsia Summer 2024

· Trained a pretrained **Pytorch** ImageNet model to classify images of Placentae, achieving an AUROC of 90

FPGA Processor Winter 2024

· Created a 16 bit processor in **Verilog** to run on a FPGA, with associated assembly language and **Python** parser

Risk Stratification for Improved Preeclampsia Prediction Summer 2023

· Used **unsupervised learning** techniques to find subtypes of Preeclampsia, created a novel **Python** workflow to perform the analysus, wrote a suite of functions and objects to streamline workflow

SKILLS

Computer Languages	Python, C, C++, Verilog, CUDA
Operating Systems	Linux, Mac OS, Windows
Packages	Scikit-Learn, Pytorch, Numpy, Pandas, Matplotlib
Tools	High Performance Computing (HPC), Quartus, Modelsim, LaTeX, 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, Fall 2023, Winter 2024

WORK EXPERIENCE

Teaching Assistant Fall 2023 - Winter 2024
*Introduction to Computer Programming (**Python**) & Data Structures and Algorithms (**C**)*

· Ran weekly labs, helping students complete lab assignments and assessing their performance
· Received positive feedback from students for clear communication and quick debugging

INTERESTS/COMMITMENTS

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