

HETAV PANDYA

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EDUCATION

University of Toronto Toronto, CA
Bachelor of Applied Science and Engineering, Computer Engineering *GPA: 3.97* Sep 2019 - May 2024

WORK EXPERIENCE

Intel Canada - [Data Center and AI Team] Toronto, CA
Software Engineering Intern May 2022 - May 2023

- Developed a netlist writer in C++ for upcoming Quartus Prime releases.
- Developed an automated testing framework in Perl to functionally verify the new netlist writer.
- Worked with the router team on a business-critical issue, affecting our top model Agilex FPGAs.

Bell Canada - [Big Data and AI Team] Toronto, CA
Data Scientist Intern May 2021 - Aug 2021

- Data querying using Apache Spark, Hadoop, and Impala. Data exploration using Python.
- Converted Impala queries to Trino reducing the time taken by 60% on average.
- Developed an automated system to detect potential flaws in new version releases, reducing detection time from 3 weeks to 15 minutes. Results were shared using MicroStrategy BI.

General Motors Canada (GM) Toronto, CA
Machine Learning Model Developer May 2021 - July 2021

- Worked on automating data collection pipeline with data pre-processing and image augmentation.
- Deployed a real-time custom object detection model with a mean Average Precision (mAP) of 0.7.

Faculty of Information, University of Toronto Toronto, CA
Data Analyst Research Intern Jan 2021 - May 2021

- Analyzed the effects of machine learning on the future path of job creation and disruption.
- Visualized processed data from research conferences, journal databases and via webscraping.

SKILLS

Programming Languages:	C++, C, Python, Kotlin, JavaScript, Perl, TCL
Machine Learning:	TensorFlow, PyTorch, OpenCV, Kubeflow, Linux
Hardware Design:	Verilog, ARM Assembly, FPGA - Quartus Prime
Data Analysis:	Hive, Impala, Trino SQL, Power BI, MicroStrategy BI, Hadoop
Project Management:	JIRA, Confluence, Agile - SCRUM, Git, GitHub, Perforce

EXTRA CURRICULARS

GitHub Education Program Toronto, CA
GitHub Campus Expert September 2022 - Present

- Selected as one of the 65 new campus experts globally in the 2022 cohort.
- Organized many open-source workshops and the first Github Field Day in Canada.

Teaching Assistant - Department of Mathematics Toronto, CA
Calculus TA September 2023 - Present

- I conduct discussion groups and tutorial sessions to help first-year engineering students build a good foundation of calculus.

UofT Engineering Society Toronto, CA
ECE Board of Director Representative April 2022 - April 2023

- Elected to represent 700+ students at the highest level of governance in the student-run Engineering Society. As a Board Member, I collaborated with other representatives to make executive decisions about the operation of the Society that offers services to 6000+ students.

UofT Machine Intelligence Student Team
Co-President

Toronto, CA
July 2021 - July 2022

- Managed a team of 180+ active members and collaborated with different organizations like the Eng. Hatchery, UCL AI Society, AI@MIT, Harvard Open Data Project and many more.

PROJECTS

Nash Equilibria convergence using RL *TensorFlow, Python*

Our team is working with Prof. Laca Pavel, to developing new Reinforcement Learning (RL) algorithms that seek convergence to a Nash Equilibrium in networks with partial information like those found in autonomous vehicle networks and smart power grids. The research is not open-source yet.

Toronto Armour *Kotlin, Jetpack Compose, Android*

<https://tinyurl.com/4jxuna82>

An open-source android application that alerts the users when they enter neighbourhoods with high safety risks.

E-Motion *Python, OpenCV, Selenium*

<https://tinyurl.com/cyhtt8jr>

A computer vision suite that enables users to play games, read e-books and listen to music using hand gestures. It secured the second place at UofT Hacks VIII

ECE-Hustler *C language, ARM Assembly, DE1-SoC board*

<https://tinyurl.com/d38wrur3>

In this game you are an ECE student in the 2nd year at UofT trying to dodge the hurdles we faced! It is an obstacle course compiled on our custom-built ARM processor and displayed on a VGA display.

COVID-19 InfoBot *Python, Selenium, Speech Recognition*

<https://tinyurl.com/ub8uyavj>

A voice assistant that provides users with credible and updated information regarding the COVID-19. It won the Wolfram award at the Hack_The_Virus Hackathon.

Hands2Ears *Python, OpenCV, Speech Recognition*

<https://tinyurl.com/65ftaddu>

A neural network model that helps converting sign language (ASL) to speech in real time. It was chosen as the Bloomberg Challenge winner and second best project in NSBE Hacks 2020.

Magnum Opus *Python, Neural Style Transfer, OpenCV*

<https://tinyurl.com/322atmp8>

My personal journey of finding “art in mathematics” and “mathematics in art”.

AWARDS

Microsoft Discover AI Challenge on AI Ethics - First Prize

Microsoft

Recognized for the AI Ethics Pipeline built during the Hackathon.

June 2021

University of Toronto Dean's Honor Award

University of Toronto

Awarded for my consistent academic standing above 3.5 GPA in all semesters.

May 2021

UofT Hacks VIII - Second Prize

UofT Hacks

Recognized for my project E-Motion and my work on computer vision enabled remote monitoring and control.

Feb 2021

Edward S. Rogers Dept. of Computer Eng. Top Student Award

University of Toronto

Awarded for being amongst the top three students in the Department of Electrical and Computer Engineering.

Sept 2020

Wallberg Undergraduate Scholarship Award

University of Toronto

Awarded for being amongst the top four students in the Faculty of Engineering, based on academic performance.

Sept 2020

Wolfram Award

Hack The Virus Hackathon

Recognized for my project COVID-InfoBot based on speech controlled information system.

Aug 2020

NSBE Hacks 2020 - Second Prize

NSBE UofT

Recognized for my project Hands2Ears, real time ASL to speech conversion.

Feb 2020

Bloomberg First Time Hack Winner

Bloomberg

Recognized for my project Hands2Ears in "First Time Hack" category at NSBE Hacks.

Feb 2020

State Topper

Central Board of Secondary Education

Received the highest marks in the province of Gujarat for annual Grade-12 Examinations.

March 2019

University of Toronto International Scholar's Award Scholarship

University of Toronto

This prestigious award is provided to students who demonstrate excellence in academics and a strong desire to learn by participating in a wide range of extracurriculars.

May 2019