# 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 an object detection model using transfer learning on 'my_ssd_mobnet'.
- The model was optimized for real time detection 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.
- Collected raw data from research conferences, package databases and via webscrapping.
- Pre-processed data and generated visualizations for further analysis.

## Skills

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

## Extra Curriculars

**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 collaborate with other representatives to make executive decisions about the operation of the Society that offers services to 6000+ students at the University of Toronto.

**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.

**UofT Machine Intelligence Student Team** — Toronto, CA
*Co-President* — 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.
- Led the team to develop two introductory ML courses: MIST101 and MIST102.

## Projects

**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.

**Personal Website** *HTML5, CSS3, Javascript* https://pandyah5.github.io/
A more detailed and informal description of who I am. Built using raw HTML, CSS and PHP from scratch.

**Magnum Opus** *Python, Neural Style Transfer, OpenCV* https://tinyurl.com/8j9hs2hx
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 - "First Time Hack" sub-category at NSBE Hacks 2020. Feb 2020

**State Topper** Central Board of Secondary Education
Awarded for receiving the highest grade in the province/state of Gujarat for the Annual Grade-12 Examination in India. 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