

# Dav Vrat Chadha

📍 Toronto, ON @ davvrat.chadha@mail.utoronto.ca in davvratchadha 🌐 davvratchadha 🔗 davvratchadha.com

## Education

### UNIVERSITY OF TORONTO

Bachelor of Applied Science in Engineering Science

📅 Sep 2020 – Apr 2024

📍 Toronto, ON, Canada

- Machine Intelligence Major
- PEY Co-op Student

## Relevant Coursework

### UNDERGRADUATE

Data Structures & Algorithms

Digital & Computer Systems

Linear Algebra

Introduction to Machine Learning

Foundation of Computing

## Other Course Experience

### PH526X: USING PYTHON FOR RESEARCH [ONLINE]

📅 May 2020 – June 2020

📍 HARVARD UNIVERSITY, USA

🔗 Certificate

## Skills

### PROGRAMMING

Python • C/C++ • Java • HTML • CSS • JavaScript • MySQL • MATLAB • Pandas • NumPy • CircuitPython • Git • Linux • Verilog

## Awards & Honors

### DEAN'S HONOR LIST

📍 University of Toronto

### SKULEPEDIA HACKATHON – 2ND PLACE

📍 University of Toronto

Researched and wrote an article about Skule history, with a team of people interested in protecting and preserving the history and old traditions of UofT engineering.

## Language Proficiency

English

Hindi

Punjabi



## Projects

### WEB DEVELOPMENT: WEBSITE - davvratchadha.com

📅 Aug 2022

📍 Toronto, ON

- Designed my website from scratch, to be used as my portfolio
- Developed an easy and simple-to-use **UX design** in **HTML5, CSS, and JavaScript**

### PARALLELOOM - Presentation

📅 Jan 2022 – Apr 2022

📍 Toronto, ON

- Designed a prototype for the loom in **Fusion360 CAD**
- Developed the program with **CircuitPython** to run prototype with Raspberry Pi

### SEAM CARVER

📅 Mar 2021

📍 Toronto, ON

- Developed a program in **C** to resize images using the technique of seam carving
- The program utilizes a dual-gradient energy function with **dynamic programming** to eliminate the lowest energy dynamic vertical seams to decrease the size of an image

### AUTOCOMPLETER

📅 Feb 2021

📍 Toronto, ON

- Created a fast predictive text application in **C** that auto-completes user's words
- Applied sorting algorithms with binary search to output the predicted word from a given file of terms

### SEMANTIC SIMILARITY - SYNONYM TESTER

📅 Dec 2020

📍 Toronto, ON

- Developed a **python AI** to calculate word similarities between a given word and three other words and return a synonym score for an entire list
- Used Swann's Way by Marcel Proust, and War and Peace by Leo Tolstoy, to create semantic descriptors, by listing each word in the texts with all other words used in the same sentence to get a context of where a particular word is used
- Applied Euclidean Norm and Cosine similarity function to calculate the similarity score

## Extra-Curricular

### COMPUTER TECHNICIAN

📅 May 2022 – July 2022

📍 Grimsby, ON

- Helped senior citizens in my neighborhood by troubleshooting and fixing software and hardware issues in their computers.
- Made the process of getting computers fixed easier for them by removing the technological barrier between them and the customer service executive
- Helped senior citizens learn about new useful features in their computers related to accessibility needs

### VOLUNTARY TUTOR FOR PYTHON

📅 Jan 2021 – Apr 2022

📍 Toronto, ON

- Tutored a first-year Civil engineering student about the basics of Python