

Dav Vrat Chadha

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Education

UNIVERSITY OF TORONTO

Bachelor of Applied Science in Engineering Science

📅 Sep 2020 – Apr 2025

📍 Toronto, ON, Canada

- Machine Intelligence Major
- PEY Co-op Student

Relevant Coursework

UNDERGRADUATE

Introduction to Machine Learning

Natural Language Computing

Artificial Intelligence

Data Structures & Algorithms

Digital & Computer Systems

Skills & Tools

PROGRAMMING

Python • Sklearn • Keras • Objax • spaCy • Tensorflow • Jax • PyTorch • NumPy • CircuitPython • Linux • C/C++ • Java • HTML • CSS • JavaScript • MySQL • MATLAB • Git • Verilog • ARM Assembly

Awards & Honours

DEAN'S HONOUR LIST

📍 University of Toronto

SKULEPEDIA HACKATHON – 2ND PLACE

📍 University of Toronto

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

Extra-Curricular

COMPUTER TECHNICIAN

📅 May 2022 – July 2022

- Helped senior citizens in my neighborhood troubleshoot and fix 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.

PYTHON TUTOR

📅 Jan 2021 – Apr 2022

- Tutored a first-year Civil engineering student about the basics of Python.
- Concepts taught ranged from simple list manipulations to using NumPy and Pandas library, based on course requirements.

Work Experience

SYSTEM DESIGN ENGINEER - AMD DCGPU

📅 May 2023 - Present

📍 Toronto, ON, Canada

- Developed an automation system in **Python** and **C** to streamline memory tests for MI300 semiconductor chips, enabling easier and standardized execution.
- Created **Python** scripts to efficiently debug and resolve parity issues in memory, ensuring optimal performance and reliability of the memory system.
- Collaborated with the Memory Domain team during the validation phase, contributing to the development of a cutting-edge memory system with HBM3 for the MI300 chips.
- Contributed to the advancement of technology by working on the El Capitan supercomputer project, which aims to break the **2 exaflops barrier**.

Projects

NO PUN INTENDED - Try API

📅 Jan 2023 - Apr 2023

- Worked in a team to create one of the largest datasets of puns and their explanations, each sentence tagged using a new tagging scheme.
- Utilized an ensemble of **transformer**-based models **DeBERTa** and **RoBERTa** to detect and locate puns with contextual masking using K-means.
- Built upon the recent research done by Amazon to improve the existing methods and achieved 75.58% test accuracy, which is competitive to GPT-4 performance (82.77%).

POLITICAL PERSUASION CLASSIFICATION FROM SOCIAL MEDIA CORPUS

📅 Jan 2023

- Worked with a social media corpus of Reddit posts and gained experience in **Python** programming and **computational linguistics**.
- Implemented **part-of-speech (PoS) tagging** and **sentiment analysis** on the posts using the **re** and **spaCy** library.
- Split the posts into sentences and gathered feature information for each post.
- Utilized **machine learning** with **scikit-learn** to learn and classify the political persuasion of the posts.

WALLSTREETBOTS

📅 Sept 2022 - Mar 2023

- Developer in UTMIST: University of Toronto Machine Intelligence Student Team, worked on WallStreetBots.
- Web platform to deploy and monitor **machine learning** algorithms like **Hidden Markov Model**, **multi-variable LSTMs**, and **SVMs**, for cryptocurrency trading.
- Developed **deep learning models** based on multi-variable LSTMs to predict the next minute cryptocurrency price from the book and trades data.
- Models achieved 68.2% accuracy for next-minute price prediction.

Miscellaneous

VOLUNTEER - GBF COMMUNITY SERVICES

📅 Oct 2019 - Aug 2020

📍 Grimsby, ON, Canada

- Streamlined the process of collecting, sorting, and distributing the donations into their respective sections.
- Led to a decrease in processing time and an increase in the work efficiency at the facility.