

VEDANT VYAS

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EDUCATION

University of Alberta

B.Sc Honors in Computer Science

Edmonton, AB

Sep 2020 - Dec 2024

Coursework: Hons Linear Algebra, Computer arch, Probability & Stochastic Process, Algorithms, Web Dev

Advanced Hons Calculus 1 & 2, SQL, C, Intro Machine Learning, Abstract Algebra, Real Analysis, Operating System

Overall GPA: 3.9/4.00

EXPERIENCE

Research Assistant, NLP Group

Edmonton, AB

Alberta Machine Intelligence Institute

May 2023 – Present

- As part of the NLP group at U of A, I am a member of various reading groups (Meta-learning, Neural Net optimization, etc.)
- I am exploring new ways to improve knowledge distillation between neural nets.

Machine Learning Engineer

Edmonton, AB

NRC CAN & CCG, UAlberta

May 2023 – Present

- Working on a joint project with [NRCCAN](#) & [CCG](#) to train a Vision model to identify tree species using lidar data.
- Project's goal is to identify the susceptibility of various trees in impacted regions to burn during a wildfire, which can assist firefighters.

Research Assistant, High-Performance Computing Group

Edmonton, AB

University Of Alberta

May 2022 – Aug 2022

- I worked on a unified MLIR dialect in collaboration with **IBM** that will allow the use of IBM MMA operations in **MLIR** to boost matrix multiplication operations to improve the compilation speed.
- My development work with IBM was done in **C++** and **Tablegen**, where I wrote a new [MMA dialect](#) in C++.
- Created **assembly (Risc-V)** coursework over the summer, including writing grading scripts using multithreading and shell, using Python to create animations, and writing a solution in RISC-V machine instructions.
- **Academic Advisor:** Dr José Nelson Amaral

RELEVANT PROJECT EXPERIENCE

[Meal Planner App](#)

- The meal planner app lets users organize the ingredients at home, add recipes, and plan meals. It has an automated shopping list created based on the meal plan for the week.
- We used **Google Firebase** to store the user data (which is linked with their login credentials). The app was primarily written in Java using the **Android Studio framework**. To understand the functioning of the app better, read [this](#).

[Math TTS Latex to Speech](#)

- This [project](#) uses React for the front end and Flask for the back end. We use OCR tools for LaTeX image processing and Google Cloud Platform for deployment and hosting. We use ANTLR4 to build our own lexer and parser to convert latex to English, and then we use google's cloud API to convert that to speech, which is processed and displayed on the web.

HONORS & AWARDS

[4th rank among 25 teams in CCPC\(Calgary Collegiate Programming Contest\) 2021](#) that got me a cash reward

Undergraduate Student Scholarship Awardee for 3 years

[Adas Team Academic Excellence Scholarship](#) in Computing Science

CAMPUS & COMMUNITY INVOLVEMENT

Problem-Solving Club, *Member*

Aug 2020 – Present

[U Of A Student Union](#), *Science Councillor*

May 2022 – Present

Mathematical Sciences Society, *Member*

Sep 2021 – Present

SKILLS

Programming: C++, Python, Risc-V, C, Regex, Java, SQL, MongoDB

DeepLearning: Pytorch, Tensorflow, Pandas, Numpy, hugging face

Web Development: JavaScript, CSS, Html

Algorithms: sub-1500 rank at [Kattis](#)