VEDANT VYAS

Website | Email | Linkedin | Github | Hackerrank |

EDUCATION

University of Alberta Edmonton, AB
B.Sc Honors in Computer Science Sep 2020 - Dec 2024
Coursework: Hons Linear Algebra, Computer arch, Probability & Stochastic Process, Algorithms, Advanced Hons Calculus 1 & 2, SQL, C, Intro Machine Learning, Abstract Algebra, Real Analysis
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 currently exploring some new novel 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 susceptibility for various trees in impacted regions to burn during 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 which aim at improving the speed of compilation.
- My development work with IBM was done in **C++** and **tablegen**, where I wrote a new MMA dialect in C++.
- Worked on the creation of **assembly (Risc-V)** coursework over the summer, that included writing grading scripts using multithreading and shell, using **python** to create animations, and lastly writing a solution in RISC-V machine instructions.
- **Academic Advisor**: Dr José Nelson Amaral

RELEVANT PROJECT EXPERIENCE

Meal Planner App
- This is a **meal planner app**, which lets users organize the ingredients at home, add recipes, plan meals and has an automated shopping list, which is 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). 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 frontend, and Flask for the backend. 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, and then it 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, Julia, Regex
DeepLearning: Pytorch**,** Tensorflow**,** Pandas, Numpy, hugging face
Query: MySQL, Sqlite3, MongoDB
Algorithms: sub 1500 rank at Kattis