VEDANT VYAS

🌐 [Website](#) ✉ [Email](#) in [Linkedin](#) ⬡ [Github](#) Ⓗ [Hackerrank](#) 📞 [Phone](#)

Education

University of Alberta   **Edmonton, AB**
B.Sc Honors in Computer Science, 3.9/4.00 GPA   *Sep 2020 - Dec 2024*

- **Selected Coursework:** Hons Linear Algebra, Computer Arch, Probability & Stochastic Process, Algorithms, Advanced Hons Calculus 1 & 2, SQL, C, Intro Machine Learning, Abstract Algebra, Real Analysis, Operating System
- **Awards:**
  * [Adas Team Academic Excellence Scholarship in Computing Science 2023](#) :
    · Awarded to the top-performing student for exemplifying academic excellence in Computing Science.
  * [CCPC 2021](#) :
    · Secured a cash reward for ranking 4th position among 25 teams in the contest.

Upcoming Role

Arista Networks   **Vancouver, BC**
Software Engineering Intern   *Jan 2024 – Apr 2024*

Experience

Alberta Machine Intelligence Institute   **Edmonton, AB**
Research Assistant, NLP Group   *May 2023 – Present*

- Proposed and experimented with innovative solutions in knowledge distillation, advancing broader research.
- Leveraged Python, PyTorch, NLTK, and Huggingface for optimized and precise development workflows.
- Contributed to reading groups focusing on Meta Learning and Neural Net Optimization.

NRC CAN & CCG, University of Alberta   **Edmonton, AB**
Machine Learning Engineer   *May 2023 – Present*

- Working jointly with NRC CAN & CCG on an initiative to develop an advanced **LiDAR transformer** model for accurate tree species identification.
- Designed and optimized machine learning models, enhancing accuracy and reliability in diverse environments.
- Aimed for real-time identification to assess wildfire vulnerability, aiding in the formulation of effective firefighting strategies.

University Of Alberta   **Edmonton, AB**
Research Assistant, High-Performance Computing Group   *May 2022 – Aug 2022*

- Collaborated with IBM to design and develop a unified **MLIR** dialect, optimizing matrix multiplication and enhancing compilation speed via the **IBM Power10 MMA** unit, resulting in improved computing efficiency.
- Employed advanced **C++** and **Tablegen** programming techniques to engineer high-quality, robust solutions.
- Created assembly (**Risc-V**) coursework, including grading scripts using multithreading and shell and animations in Python.

Personal Projects

[Meal Planner App](#)

- Developed a Full-Stack Meal Planner App using **MERN** stack (MongoDB, Express, React, NodeJS).
- Implemented automated Shopping List creation based on ingredients needed for meal plan and enhanced security through the integration of JSON Web Tokens for user authentication.

[Math TTS Latex to Speech](#)

- Developed the [project](#) using **React** for the front end and Flask for the back end.
- Implemented OCR tools for LaTeX image processing.
- Utilized **ANTLR4** to construct a custom lexer and parser for converting LaTeX to English.
- Integrated **Google's Cloud API** for speech synthesis to convert text to speech, which is then processed and displayed on the web interface.

Technical Skills

Languages: C++, Python, Risc-V, C, Regex, Java, SQL, JavaScript, CSS, HTML
Developer Tools: MongoDB, Firebase, Pandas, Numpy, open3d, nltk, Spacy
Deep Learning Frameworks: Pytorch, Tensorflow, Hugging Face