VEDANT PARIKH

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Education

University of Waterloo **Expected Graduation: 2030**

Bachelor of Systems Design Engineering *Waterloo, Ontario*

Work Experience

ESGTree **Jul 2024 - Sep 2024**

Software Engineer Intern *Waterloo, Ontario*

- Developed a secure **Login API** and integrated business logic into the web application's frontend
- Designed a **MySQL** data model and wrote queries, enabling efficient handling of data entries in the backend, improving the model performance by **26%**
- Created **CI/CD pipelines** using **GitLab** to automate linting, testing, and deployment

LoopX **May 2024 - Jul 2024**

Software Engineer Intern *Waterloo, Ontario*

- Developed **Python** scripts to detect duplicate frames in **1M+** images, resulting in a **20%** improvement in the efficiency of the **Autonomous Operation System (AOS)**
- Created dashboards and real-time reports using **CVAT.ai** and **ROS**, enhancing decision-making for operators
- Boosted AI performance by testing and optimizing models in **ROS**, accelerating base model speed by **1.5x**

Leadership Experience

Vice President, TT4EVER | Non-Profit **Jan 2022 - Dec 2024**

- Organized and led a nationwide fundraiser initiative, hosting table tennis tournaments spanning from British Columbia to Newfoundland, attracting over **250 participants** and raising over **$11,000**
- Managed a team of **60+ volunteers**, overseeing logistics, securing sponsorships, and coordinating marketing efforts to ensure **smooth event execution**

Projects

Protivtiy **ReactJS | NodeJS | ExpressJS | MongoDB**

- Created a full-stack web application using the **MERN** stack to boost productivity and manage tasks effectively
- Developed a **ReactJS**-based user interface featuring task creation, visual analytics, and multiple task views
- Implemented the backend with **NodeJS/ExpressJS** and **MongoDB** to optimize performance

Visualizicar **Processing | Java**

- Developed a 3D car configurator with interactive model selection, rotation/zoom, comparisons, and info popups
- Created matrix transformations and STL file parsing in **Processing** for accurate 3D car rendering
- Optimized rendering efficiency by **30%** using sorting algorithms for correct triangle orders and applied backface culling to improve overall performance

Sentilytics **Python | Streamlit | Hugging Face Transformers**

- Developed and deployed a sentiment analysis platform that extracts insights from **Amazon product reviews**
- Implemented both traditional NLP (**VADER** via **NLTK**) and transformer-based models (**RoBERTa** via **Hugging Face**) to compare sentiment detection accuracy
- Built interactive visualizations with **Streamlit** and **Seaborn**, enabling users to explore **sentiment distribution** across star ratings and input custom text for real-time analysis

Technical Skills

Languages: Java, Python, JavaScript, TypeScript, SQL, PHP, HTML/CSS, Processing

Developer Tools: Git, Postman, Prisma, MongoDB

Libraries/Frameworks: ReactJS, NodeJS, ExpressJS, VueJS, ROS, Streamlit, Hugging Face Transformers