

Adit Dua

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TECHNICAL SKILLS

Languages: Python, JavaScript, SQL, HTML & CSS, R, Java, C/C++, MATLAB, VBA

Developer Tools: Git, Jupyter Notebook, VS Code, PyCharm, Eclipse, Google Cloud, Firebase, Docker, AWS

Libraries: NumPy, Pandas, Scikit-learn, TensorFlow, TFLite, XGBoost, Matplotlib, OpenCV, SVM, K-means clustering, k-NN, Naive Bayes, Decision Forests, Seaborn, Keras, SciPy, YOLO, PyTorch, Statsmodels

Data Visualization: Tableau, Splunk, Plotly, Excel, PowerPoint, Power BI

EDUCATION

Wilfrid Laurier University

Waterloo, ON

Honours Bachelor of Science in Computer Science, Co-op Program

Sep. 2023 – July 2027

- Received \$1250 in-course scholarship for maintaining the GPA over 10.50
- Faculty of Science: Dean's Honour Roll 2023-24

EXPERIENCE

Data Engineer

March 2025 – Present

HawkHacks

Waterloo, Ontario

- Built real-time **ETL** data pipelines using **Python**, **JavaScript** and **SQL** to extract operational data from **Firestore** and **Google Analytics** into structured datasets, improving reporting efficiency, enabling trend analysis, and applying advanced analytical skills.
- Automated sponsor data updates by implementing **API**-based real-time synchronization with **Firebase**, demonstrating ownership and leadership acumen toward dynamic insights delivery.
- Developed dashboards, web pages using **Power BI**, **React.js** and **Notion API**, applying UI design principles to enable 30% faster decision-making for stakeholders, improving time-management skills.
- Managed **Git** version control and documented backend architectures for clean deployments on **Google Cloud**, leveraging microservices, **REST APIs**, **CI/CD pipelines** and strong organizational skills.

Research and Development Intern

May 2024 – August 2024

Logic Fruit Technologies

Gurgaon, India

- Developed and optimized algorithms for ADAS systems including object detection, lane detection, and collision avoidance, leveraging machine learning libraries like **OpenCV**, **Pandas**, **NumPy**, **SciPy**, **Scikit-learn**, while applying problem-solving skills and results-oriented research practices.
- Implemented 2D/3D face recognition systems with **TFLite** and **PyTorch**, enhancing AI-powered authentication by leveraging the agile software development life cycle and employing design patterns to deliver scalable solutions, demonstrating strong design and implementation skills while presenting design decisions to external audiences.
- Integrated **LiDAR** and camera data for precise collision detection and adaptive lighting, enhancing environmental perception and increasing road safety through **GPU-optimized**, AI-driven real-time solutions.
- Collaborated with cross-functional teams to perform comparative research, model evaluation, and structured presentations using **Microsoft Office tools** to stakeholders, displaying strong communication, interpersonal, and operational analysis skills, in fast-paced environments.

PROJECTS

HawkHacks Analytics | *Python, JavaScript, SQL, Firestore, Google Analytics, Notion API* March 2025 – Present

- Developed a streamlined data pipeline for systematic extraction and preprocessing sponsor-related data from **Firestore** and **Google Analytics**, ensuring data accuracy, organization and enabling trend analysis, insights generation for 2024 and 2025.
- Implemented real-time data synchronization with **Firestore**, automatically updating the dataset when new entries, such as schools, were added to the database.
- Leveraged the **Notion API** to create a comprehensive, easily accessible **Notion database** with dashboards, facilitating sponsor data management, filtering, and export capabilities for financial reporting.

2D & 3D Face Recognition | *Python, PyQt5, TFLite, Mediapipe, OpenCV, AI /ML* July 2024 – Sep 2024

- Built a real-time facial analysis system using a webcam to perform 3D face detection (leveraging depth information) and 2D face recognition (based on image data) with **Python**, **TFLite**, **Mediapipe**, and **OpenCV**.
- Enabled users to capture multiple images of their face from different angles, improving system accuracy and adaptability for future face recognition tasks using **OpenCV** for image capture and storage.
- Designed an intuitive **PyQt5 GUI** for seamless switching between 3D detection and 2D recognition modes, allowing users to easily capture, save, and store images, while utilizing **TFLite** for optimizing model inference on devices.
- Applied statistical modeling approaches to analyze facial geometry data, integrating feasibility-driven, user-centered design considerations in the system pipeline.