AADI UMRANI

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Core Software Skills

- **Languages:** Python, Flutter, JavaScript (ReactJS, Express, NodeJS), HTML, CSS, C++, Java, SQL
- **Tools:** VS Code, IDEA, InfluxDB, MongoDB, MySQL, Grafana, AWS (DynamoDB, AppSync, EC2, S3), WSL2

Certifications

PCEP: OpenEDG Python Institute, **Full Stack Dev** (*In progress*), **Competent Communicator:** Toastmasters International

Work Experience

Full-stack Developer Intern	PlayTheory Labs	Jan 2024 - April 2024

- Implemented enhancements in our data processing scripts written in **Python**, leveraging **LLMs** and **NERs** alongside asynchronous functions and multithreading. Achieved a 50% reduction in data processing times, while creating a validation tool increased data accuracy by 30%. Created a cron job on **EC2** to run these scripts periodically.
- Overhauled backend architecture for data products by transitioning to streaming data fetching and implementing pagination techniques. These enhancements boosted loading speeds by an impressive 45%, significantly enhancing overall UX. Implemented **Clerk** authentication for fortified security protocols. Developed browser extensions using **ReactJS** to augment product accessibility, granting limited yet complimentary access to some features.

Software Developer	Escape	Jun 2023 – Aug 2023

- Developed a cross-platform social media application with **Flutter**, streamlining development. This resulted in a notable 25% reduction in development time, contributing to significant time savings in the project. Leveraging **Riverpod** for state management resulted in a 15% faster user interface rendering, and eliminated prop drilling, which led to a significantly smoother UI and better structured code.
- Incorporated a scalable backend with **AWS AppSync** and **DynamoDB**, achieving consistent loading times of under 450 milliseconds, regardless of database size, ensuring a seamless user experience and responsiveness.

Computer Vision Engineer	Autogenbot LLP	May 2023 – Aug 2023

- Engineered a robot computer vision program using **Python**, that detected, counted, and diagnosed fruits in a field, improving the yield estimate accuracy by about 20% compared to area-based estimation. Custom-trained a YOLOv5 model with an accuracy of 86.5% and mAP of 86.3%.
- Conducted rigorous testing of the program on both Raspberry Pi and a Snapdragon 845-based robot. Implemented optimizations to reduce CPU usage, leading to a substantial 40% increase in frame rate and a noteworthy 5°C decrease in CPU temperature, enhancing overall system performance.

Projects

Toastmasters Website
- Collaborated with a Toastmasters club to develop a website showcasing their activities, events, and achievements.
- Developed a responsive frontend using **React JS** and utilized **Supabase** for efficient data storage and authentication.
- Worked closely with the club EXCOM to understand the requirements and received feedback throughout the development phase.

Booking App
- Developed a cross-platform booking management app using **Flutter** due to the vast widget library and customization options. Also used **Cloud Firestore** due to its scalability and real-time synchronization, resulting in a 40% decrease in data loading times, ensuring a seamless user experience.

Temperature and Humidity Monitoring
- Developed an IoT application that uploaded simulated sensor data to an **Influx DB 2.0** database stored on an **AWS EC2** instance running on the **Amazon Linux 2023** OS.
- Hosted **Grafana** on the instance and created a dashboard to visualize the data, resulting in a 30% improvement in data interpretation quality over other comparable methods, like Power BI.

Education

University of Waterloo (Sep 2022 – May 2027), Degree: BASc Biomedical Engineering, GPA: 3.0