Akshit(Aarambh) Sanoria

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Education

University of Maryland, College Park College Park, Maryland
Bachelor of Science in Computer Science, Minor in Human Development **Expected December 2024**
Relevant Coursework: Object-oriented programming and data structures; Computer Systems in C, Functional Programming, and Assembly; Discrete Structures; Algorithms; Data Science; Intro to Artificial intelligence;

Arizona State University(Computer Science track) **August 2021 - August 2022**
Dean's List of Ira A. Fulton Schools of Engineering

Iowa State University(Mechanical Engineering track) **January 2021 - August 2021**

Projects/Experience

WhatFlower (Personal Project) | Swift, UIKit **August 2023 - Present**
- Devising and implementing iOS app's image recognition by **30%** through agile methods, optimizing a **machine learning algorithm** for accurate flower identification.
- Utilizing **CoreML** technology to optimize image recognition capabilities, leading to an increase in accuracy compared to previous methods.
- Enhanced flower recognition accuracy by **25%** through advanced image recognition algorithms and integrated the **Wikipedia API** for supplementary images and descriptions, enriching the user experience in our application.

Regular Expression Engine (Class Project) | OCaml, Python **October 2023**
- Constructed a regular expression engine using **OCaml**, facilitating the conversion of **NFAs** (Nondeterministic Finite Automata) into DFAs (Deterministic Finite Automata).
- Employed advanced **NLP** techniques, including the utilization of **context-free grammars**, **parsing**, and **tokenization**, to enhance the engine's capabilities and efficiency.

Flash Chat (Personal Project) | Swift, Firestore, Swift UI Kit and Libraries **July 2023**
- Developed and implemented a dynamic welcome screen utilizing various libraries and leveraging **SwiftUI Kit**, resulting in a **40%** decrease in user onboarding time.
- Implemented a real-time chat app on **Firebase**, boosting user engagement by **30%** with sub-1-second response times using **Google Firebase Authentication.**
- Optimized database queries in **Google Cloud Firestore database**, resulting in a **45%** decrease in data retrieval time and improving overall system performance.

BitConnect (Group Project) | ChatEngine API, Google Authentication, Google Firestore, NextJS **April 2023**
- Designed and implemented a secure chat application using **NextJS** for the web app frontend, **React** Native for the mobile frontend, and integrating with the **ChatEngine API** for chat hosting, resulting in a **20%** increase in user engagement.
- Operationalized **Agora API** for video calling, achieving a **50%** reduction in latency, and ensuring an average call connection time under 3 seconds, enabling a maximum of **8 participants** on a single call.
- The backend was hosted on the **google cloud web service** and employed **Firebase authentication,** allowing users to log in securely using their Google accounts.

Experience & Honors

Student Employee | Iowa State Dining **February 2021 - July 2021**
- Maintained high standards of customer service during high-volume, fast-paced operations. Gained the ability to work under pressure, improved my communication skills, and manage time effectively.
- Handled currency and credit transactions quickly and accurately, demonstrating attention to detail and numerical accuracy.
- Communicated clearly and positively with coworkers and management, showcasing strong interpersonal skills and ability to work in a team.

Research Assistant | Jaypee University of Engineering and Technology **January 2020 - April 2020**
- Worked as research assistant under a professor and collaborated with two other master's students on the publication of a research paper on Fiber Reinforced Composite Plates Subjected to Transient Dynamics in a leading scientific journal.
- Utilized software's like ABAQUS for element, analytical and structural simulation.
- Sanoria, A., Murthy, Y. I., & Jaiswal, S. (2020). Parametric Studies of Fiber Reinforced Composite Plates Subjected to Transient Dynamics. JUET Research Journal of Science & Technology, 6(1&2), 1-5. http://www.publishingindia.com/JUET/112/parametric-studies-of-fiber-reinforced-composite-plates-subjected-to-transient-dynamics/10917/16294/

Technical Skills

Java, Python, C/C++, OCaml, Dafny, Haskel, Rust, AVR-Assembly, HTML, CSS, EJS, REST, JavaScript, Typescript, React, NextJS, NodeJS, MongoDB, MySQL, Google Firebase, Swift, UIKit, Git, Web API, Docker, Postman, and Unix/Linux Environments.