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 in Java; Computer Systems in C, Functional Programming, and Assembly; Discrete Structures; Algorithms; Linear Algebra.

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**

Technical Skills

Programming: Java, JavaFX, Python, C/C++, OCaml, Racket, AVR-Assembly, HTML, CSS, EJS, JavaScript, Typescript, React, NextJS, MongoDB, Google Firebase, iOS Development(Swift), UIKit, Git, Web APIs, and Unix/Linux Environments.

Projects

WhatFlower (Personal Project) | Swift, UIKit **August 2023 - Present**
- Devising and implementing an innovative machine learning algorithm tailored for our iOS application, revolutionizing the app's image recognition capabilities to recognize flowers.
- Utilizing CoreML technology to optimize image recognition capabilities, leading to an increase in accuracy compared to previous methods.
- Applying advanced image recognition algorithms for flower species determination, coupled with seamless integration of the Wikipedia API to provide supplementary images and descriptions based on recognized flower names.

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**
- Deployed a real-time chat application on the Firebase platform, leveraging Google Firebase Authentication for user management to ensure a secure and responsive chat experience.
- Streamlined database performance by optimizing queries in google cloud firestore database, facilitated in a 30% decrease in data retrieval time.
- Enhanced the user experience by developing a dynamic welcome screen using multiple libraries and employing SwiftUI Kit to manage the keyboard's behavior.

BitConnect (Group Project) | ChatEngine API, Google Authentication, Google Firestore, NextJS **April 2023**
- Designed a web app using NextJS and a React Native library to develop a secure chat application. It includes a NextJS API route handler, which uses the ChatEngine API for hosting chats and handling the NPM component for UI.
- Employed Firebase authentication, allowing users to log in securely using their Google accounts enhancing user convenience and access control.
- Operationalized Agora API for video calling experience, reducing latency by 50% and achieving an average call connection time of less than 3 seconds.

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 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 to 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/