# 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/>