Aman Kumar Aggarwal

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SUMMARY

Experienced and passionate programmer versed in object oriented design and able to work independently with experience on requirement based software development and validation.

EDUCATION

UNIVERSITY OF CALIFORNIA – SAN DIEGO
B.S. Computer Science, CSE   **Expected June 2023**
GPA: 3.89

SANSKRITI THE GURUKUL, INDIA
High School (ISC Board)   **May 2019**
Final Percentage: 97.75%

Relevant Coursework: Software Engineering, Algorithm Design and Analysis, Data Structures, Object Oriented Design, Math Algorithms and Systems Analysis, Software Tools and Techniques, Statistical Methods, Discrete Mathematics, Linear Algebra, Theory of Computation, Computer Architecture, Web Development – HTML, CSS, JavaScript, Bootstrap

EXPERIENCE

SIBROS TECHNOLOGIES INC, San Jose, California
Software Engineering Intern   **July 2020 – December 2020**
- Worked on a requirements and test case management tool used by firmware team to automate the process of generating product specifications and its validation status helping developers validate the product effectively
  - Designed a plugin to hook with **pytest** to provide end to end traceability between test case specifications and implementations by linking each python test case with the specifications using an ID
  - Took ownership in a validation report generation feature used to meet compliance with different ISO standards by providing visual requirements and test case traceability using a combination of **HTML**, **CSS**, **JavaScript**, and **Python**
  - Integrated the plugin with the **bazel** build system to provide easier usage for users of the tool

- Developed frameworks to help team test company products to comply with functional safety goals by setting up an **HTTP server** to transfer files and establishing communication between multiple devices over **protocol buffers** using **TCP socket** communication**.**

PROJECTS

SoundParty App - Manage music playback for group of users through Spotify   **March 2021**
- Developed a web app with **ReactJS** frontend to allow users in a room to manage host's song playbacks
- Designed a **RESTful** API utilizing **Django** framework to manage multiple user rooms and their requests
- Interacted with Spotify Web API to display song data and manage playback

Tunnel Man game   **August 2020**
- Designed a **C++** game for the users to pick and use collectibles as they move around digging through mud avoiding/killing various computer controlled characters
- Utilized graph path finding algorithms Breadth First Search (BFS), and Dijkstra's algorithm to navigate the computer controlled characters following the player

Connect 4 game with computer player   **May 2020**
- Developed Connect 4 game in **C** using a recursive puzzle solving algorithm to decide computer controlled moves
- Proved to be the best Connect 4 algorithm winning the Connect 4 competition between all student developed algorithms

SKILLS

- Frontend: ReactJS, VanillaJS, HTML5, CSS
- Backend: Django Rest framework, API Development
- Languages: Python (Intermediate), C++ (Basic), C (Basic), Java (Basic)

- Technologies: Jinja2 Templating Engine, Protocol Buffers, TCP Sockets, Bash scripting, Bazel build system, Git, Linux