RISHAB SESHADRI

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EDUCATION:

UNIVERSITY OF GEORGIA, *FRANKLIN COLLEGE OF ARTS & SCIENCES*
B.S. IN COMPUTER SCIENCE & B.S. IN MATHEMATICS ***AUGUST 2022 – EXPECTED MAY 2026***

- Emphasis in Software Engineering and Applied Mathematics
- GPA: 3.92 / 4.00

WORK EXPERIENCE:

SOFTWARE DEVELOPER, *TELEGU AUDIO COLLECTIVE* ***APRIL 2023 – PRESENT***

- Access, interact with, and convert the Ampache 5 Python API to a more robust and relevant JavaScript API
- Develop user data storage using MariaDB along with an ExpressJS API for global access to user settings
- Design the backend software and data handlers for a South India-focused audio production and streaming application

LEAD BACKEND DEVELOPER, *IVUE: WORLDS IVUE* ***MAY 2023 – AUGUST 2023***

- Program in JavaScript to read, interpret, and write to iVue drones using a PixHawk flight controller
- Lead the group of backend developers to build the Worlds iVue drone control software
- Work with front-end development team to connect the packet interactions with the visual half of the application

INTERN DEVELOPER, *GEORGIA STATE UNIVERSITY* ***MAY 2020 – AUGUST 2020***

- Assisted in the planning of a project with Professor Ashwin Ashok and other students at GSU to improve AI-based object detection in cars to detect and avoid crashes
- Worked with the team to develop a smaller model of a real-life environment to test a model car
- Sketched and built the models necessary for testing the car with all road signs and environments necessary

EXTRA CURRICULAR EXPERIENCE:

DRIVETRAIN PROGRAMMER, *UGA ROBOTICS: IEEE* ***AUGUST 2022 - PRESENT***

- Build and program a robot to compete in the Institute of Electrical and Electronics Engineers Southeast Conference
- Implement programs in Python and Java such as a pathfinding algorithm, object detection, and a collection system for game elements on the field
- Plan and 3D model the robot, research necessary documentations, and directly process motor input with an Ubuntu system using a Raspberry Pi 4

ALGORITHM DIVISION PROGRAMMER, *UGA ROBOTICS: PROSTHETIC ARM* ***AUGUST 2022 – PRESENT***

- Work with a team of other programmers to code and build a prosthetic arm using object-oriented programming and version control (Git)
- Work with the Dynamixel documentation in C and Java to create PID, path-finding, and other algorithms to mimic the human hand
- Design solutions, such as search algorithms, to maximize efficiency in storage and in processing speed on an Arduino

MENTOR, *FRC AND FTC ROBOTICS* ***APRIL 2016 – PRESENT***

- As co-president (2021-22), lead, manage, and guide the 60+ members of Alpharetta Robotics and its 4 teams, seeking sponsorships, organizing events
- Work with the club's financial board to keep the club and teams well-funded and running by finding sponsorships, budgeting, and maximum funding
- As mentor, lead new members, assisting with programming (Java with FTCLib, object detection and PID system), electrical, and mechanical training

RESEARCH LEAD, *ARTIFICIAL INTELLIGENCE CLUB* ***SEPTEMBER 2019 – MAY 2022***

- Learn and teach Python with libraries such as OpenCV for object detection, image processing, and more AI oriented subjects
- Research and plan new topics to teach – projects include a PID-controlled drone, object detection for self-checkout, and more

PROJECTS:

THE INREEL: PASTEVEN ***JANUARY 2023 – PRESENT***

- PyQt6 based application designed to be an elevated drawing application with additional features that are not commercially available and customizable – current work in progress
- Current goals: Improve features such as border detection and continue developing from list

GRISELDA MIXBOARD ***AUGUST 2022 – PRESENT***

- JavaFX based application that allows a user to record and upload audio clips, connecting each clip with a key on the keyboard to allow for real-time playing, beat mixing, and more
- Current goals: add an equalizer to the audio clips as well as a trim feature

TECHNICAL SKILLS:

- **LANGUAGES:** *Java, Python, JavaScript, HTML/CSS, C, C++*
- **OPERATING SYSTEMS:** *Windows, MacOS, Linux (Fedora, Kali), Unix*
- **UTILITIES:** *Git, SceneBuilder, Emacs*
- **LIBRARIES:** *JavaFX, PyQt6, Ampache, OpenCV, Node-MAVLink, MariaDB*