

AROSSA ADHIKARY

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github.com/arossaadhikary | arossaadhikary.github.io/portfolio/ (QR Code)



EDUCATION

B.S. Computer Science, Minor: Electrical, University of Florida Honors Program, Gainesville, FL **May 2027**
Certifications: CompTIA Security+ (Expected: May 2025)

PROFESSIONAL EXPERIENCE

Incoming Software Engineering Intern: General Electric Appliances **Spring 2025**
Research Assistant: UF Technology for Occupational Performance Lab **Aug 2024 - Present**

- Integrated data from **Qualisys & Visual3D** to develop **Python** script to automate biomechanical calculations for gait analysis with **pandas/numpy/scipy** improving data accuracy processing speed by 80%
- Performed data analysis using **Visual3D & Theia** by identifying gait cycles & adding markers identifying movement
- Leveraged an AI-based markerless motion capture system to collect data on walker biomechanics (ie: joint positioning)

LEADERSHIP

Software Development Lead: Engineering Without Borders (EWB) **Apr 2024 - Present**

- Led a 10-person team to successfully deploy a centralized streamlined communication between Peru & Nepal chapters, formalizing the merger of previously independent organizations.
- Implemented responsive design principles using **React & Figma**, creating wireframes & developing a dynamic, user-friendly website to enhance accessibility across devices
- Built **Firebase** user authentication system, enabling secure access for 100+ members/alumni & prospective applicants to manage exclusive project updates & centralize the process for tracking application statuses

Social Director: Women in Computer Science **Apr 2024 - Present**

- Planned & budgeted 3x/biweekly community events with executive board & company sponsors for 200+ members
- Supervised budget allocation of \$1,000 for end-of-year gala, skillfully collaborating with local venues & utilizing event planning tools to design a memorable, cost-effective event catering to 100+ guests
- Mentored a freshman in networking/resume building, guiding them in essential skills for securing tech internships

PROJECTS

Clarifina: 4th Google, 3rd Vanguard - ShellHacks Hackathon | **Sept 2024**
(AWS, Firebase, Textract, OpenAI, TypeScript, Node.js, Express.js)

- Developed a platform that simplifies complex financial documents by leveraging **AWS S3, Textract, & OpenAI's GPT** for personalized summaries & recommendations based on user demographics
- Aided in engineering backend architecture using **Lambda, API Gateway, & Firebase Auth**, integrating document processing, user management, & session persistence with Firestore
- Led designing an intuitive frontend in **TypeScript**, implementing features like PDF annotation & AI-powered term definitions, with a focus on creating a user-friendly & interactive experience

PageTurners: The Post-Book Connector | (Python, React Native, Expo Go, Flask) **Jul 2024 - Aug 2024**

- Crafted algorithm for full-stack mobile application to deliver personalized book recommendations by implementing similarity scores using **Term Frequency-Inverse Document Frequency & Cosine Similarity** techniques
- Custom-built a **Flask API** to provide book recommendations & enable **fuzzy matching** for accurate book identification
- Led design & development of a clean, intuitive mobile interface, integrating dynamic user feedback & recommendation visualization for seamless swiping & exploration of personalized book suggestions/search results

Earthquakes Data Visualizations from CORGIS Database | (Python) **Dec 2023**

- Implemented advanced data cleaning techniques using **pandas** to convert 6000+ rows of earthquake data into pkl files, eliminating outliers with **numpy**, resulting in a refined dataset for more accurate geographic analysis
- Conducted hypothesis testing using **numpy**, including the Anderson-Darling test, to evaluate the distribution of earthquake magnitudes & their correlation with geographic factors, visualizing results with **matplotlib**
- Performed correlation analysis with **pandas & matplotlib** between earthquake magnitude & various significance factors, achieving a strong positive correlation (0.91) to quantify earthquake impacts on local communities

AnimalCare - 2nd Place - Designathon with Dream Team Engineering | (Unity, C#, OpenAI, GPT 3.5) **Oct 2023**

- Designed a virtual waiting room RPG-style video game to help young children visiting the hospital learn about intimidating medical procedures through interactive tile mapping & educational chatbots
- Leveraged **GPT-3.5 Turbo** to curate chatbot interactions, developing the game within 24 hours to ease anxiety & create an engaging learning experience for children

TECHNICAL SKILLS

Languages: Python, Javascript, C++ | **Full-Stack Technologies:** React.js, Node.js, HTML/CSS, Firebase
Tools/Technologies: Figma, Adobe Photoshop, numpy, matplotlib, pandas