Brian Mbaji

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Education

University of Florida Gainesville, FL

Bachelor of Arts and Sciences in Computer Science | GPA: 3.4 *Aug.'22 – May.'26*

- **Relevant Coursework:** Programming Fundamentals I & II, Data-structures and Algorithms, Operating Systems, Intro to Software Engineering, Discrete Math, Engineering Statistics
- **Awards & Honors**: UWC Davis Scholarship($35,000)
- **Clubs & Affiliations**: ColorStack(Treasurer), National Society of Black Engineers(NSBE), UF Computing Student Union, African Student Union

Projects

Harmony Hub | ***Python, Flask, React*** April 2024 – June 2024

- Developed a **full-stack web application** to recommend Spotify playlists based on user preferences, leveraging **OAuth** for secure data access.
- Implemented asynchronous data fetching with `async/await`, reducing data retrieval time by **40%**.
- Created an algorithm to score playlists and compared sorting efficiencies of Merge Sort and Quick Sort, with Quick Sort proving 25% faster.
- Enhanced user engagement by **15%** through accurate playlist recommendations and real-time feedback on user preferences.

Babblr | ***Firebase, React,Git*** May 2023 – June 2023

- Designed and developed a **dynamic social media application** using React and Firebase, enabling users to perform essential functions such as liking, commenting and posting content.
- Solved User Authentication Challenges by implementing Firebase Authentication, which streamlined secure user registration and login features, ensuring a personalized experience for each user.
- Enhanced User Experience by solving data management challenges by integrating Firebase Realtime Database to store and retrieve user-generated content therefore achieving a **20%** reduction in app loading times.
- Utilized Firebase's NoSQL database and real-time features to support up to **200,000** concurrent users in the social media app.

AVL Tree | ***C++,Git*** May 2023 – June 2023

- Designed and implemented a versatile AVL (Adelson-Velsky and Landis) tree data structure, showcasing proficiency in database integration, algorithmic implementation including insertion, removal and search, and optimization techniques.
- Thoroughly reviewed and optimized the codebase, decreasing functionality runtime by 40% and resolving 90% of the bugs.

Leadership Experience

Gator Sudoku | ***Python*** April 2022 – May 2022

- Collaborated with team members to identify and resolve 90% of the bugs, improving overall project functionality and user experience of the Sudoku Gaming Application.
- Managed documentation and provided clear project updates to ensure transparency and understanding among team members.
- Implemented version control (e.g.,Git) to track code changes and coordinate collaborative coding efforts.

Technical Skills

Languages: Python, C++, React, JavaScript, HTML/CSS,
Frameworks: React, Node.js, Flask, JUnit, WordPress, Material-UI, FastAPI
Developer Tools: Git, Docker,Firebase, VS Code, Visual Studio, PyCharm
Libraries: pandas, NumPy, Matplotlib, spotipy