Nelson Rodriguez

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Education

Georgia Institute of Technology   Atlanta, GA
Bachelor of Science in Computer Science   *Graduated: December 2023*
- *Relevant Coursework*: Data Structures and Algorithms, Design and Analysis of Algorithms, Software Engineering, Database Systems, Object-Oriented Programming, Computer Architecture, Systems + Networks, Linear Algebra
- *Concentrations*: Information Networks & Media Applications

Experience

eKlozet   Atlanta, GA
Contract Software Developer   *January 2022 – December 2022*
- Developed iOS app featuring collaborative-filtering algorithm for user recommendations and clean UI/UX design
- Built and integrated SQL database to support CRUD functions, efficiently handling data for 10,000+ users
- Implemented Google Calendar API synchronization for event management functionality, improving user engagement
- Delivered on client expectations by utilizing Git for code versioning and Jira for Agile-based project management

GT WebDev   Atlanta, GA
Georgia Tech Student Organization Member   *August 2021 – December 2022*
- Contributed to collaborative web applications for GT WebDev with student-led teams by developing Material UI/UX features using React and managing code versioning to ensure seamless integration across app components
- Organized and hosted multiple front-end workshops and seminars, measured by a 50% increase in attendance

Projects

YouTube NLP Sentiment Analysis | *NLTK, Python, Django, React*   August 2024 - Present
- Developed a YouTube video sentiment analysis web application using Django and Python, integrating NLTK for natural language processing to analyze and interpret comments and metadata from videos.
- Created React front-end for YouTube URL Input and real-time sentiment analysis results

Nexus — Blogging Web App | *React, Node.js/Express.js, MongoDB*   June 2024 - July 2024
- Utilized React Hooks and Context API for state management, ensuring efficient data flow and page rendering
- Leveraged Node.js server and MongoDB to create REST API that facilitates data fetching and post operations
- Optimized performance through session management with JWT and employed efficient data fetching with Axios
- Implemented secure user authentication with bcrypt algorithm for salting + hashing and MongoDB for storage

Running Sonification Engine | *Java, Processing*   June 2023 - July 2023
- Developed a dynamic audio-based running simulator that transforms sensor data such as cadence, heart rate, and other physical metrics–into real-time actionable feedback/sonifications, enhancing runner performance
- Achieved 75% increase in runner performance measured by responses to engine performance in research analysis

Hypertension and Stroke Analysis | *Python, NumPy, Pandas*   April 2023 - May 2023
- Analyzed diabetes, hypertension, and stroke datasets from Kaggle using NumPy, Matplotlib, and Pandas Python libraries to research and visualize the level of correlation between variables for medical research analysis.
- Achieved correlation coefficient of 0.84, indicating a strong relationship between measured health conditions

eKlozet — Sustainable Fashion Mobile App | *Swift, SQL, Xcode*   January 2022 - December 2022
- Developed collaborative-filtering algorithm for outfit recommendations and designed preference screening in Swift
- Integrated SQL database to facilitate user authentication and clothing recommendation functionality, enhancing the application's ability to dynamically present clothing items directly to 10,000+ users
- Won 2nd place in the Fall 2022 Georgia Tech CS Junior Design Capstone Expo out of 30+ teams

Technical Skills

Languages & Frameworks: Java, JavaScript, React, Python, Swift, HTML/CSS, C, Assembly, SQL, MongoDB
Developer Tools: Git, GitHub, Terminal/PowerShell, VS Code, Processing, Copilot/ChatGPT, Express.js, Node.js, Django, MaterialUI, Tailwind, Vercel, Render, Docker, Kubernetes, AWS, LaTeX, Jira, Agile, Scrum
Natural Languages: English (Native), Spanish (Fluent), Japanese (Basic/Conversational)