Yashwanth Raj Varadharajan

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GitHub | LinkedIn | Portfolio | Google Scholar

SUMMARY

Software Engineer with a Master's in Computer Science and a strong background in full-stack and iOS application architecture. Proven ability to build and deliver scalable web and mobile applications using technologies like React, Firebase, PostgreSQL, SwiftUI, and Node.js. Proficient in automation tools, CI/CD pipelines, and API integration to enhance performance and user experience. Passionate about creating intuitive, high-impact products, continuously mastering new technologies, and solving complex technical challenges.

EDUCATION

The George Washington University, School of Engineering & Applied Science   **Washington, DC, USA**
Master of Science in Computer Science
- CGPA: 3.73/4.0

Vellore Institute of Technology   **Tamil Nadu, India**
Bachelor of Technology, Electronics and Computer Engineering
- CGPA: 3.6/4.0

WORK EXPERIENCE

Parkli   **March 2024 – December 2024**
iOS Software Developer
- Oversaw front-end architecture for an iOS-based parking reservation app, leading a team of 7 developers to build a scalable SwiftUI codebase and ensure consistent, high-quality design execution.
- Built the User Interface from scratch and translated high-fidelity wireframes into modular, reusable SwiftUI components, delivering a cohesive and responsive user interface.
- Engineered backend integration using Firebase to implement secure user authentication, real-time data handling, and robust cloud storage capabilities.
- Designed and implemented CI/CD pipelines with GitHub Actions, automating build and deployment processes to accelerate development cycles and ensure release reliability.

Access Healthcare Services   **April 2023 - June 2023**
Associate Developer
- Collaborated on the development of Echobot, an RPA-based automation suite for Revenue Cycle Management, contributing to a 40% reduction in implementation time through streamlined workflows.
- Assisted in developing Echo Talk, a React.js based web application for call center operations, integrating RESTful APIs to provide real-time access to patient records and improve agent productivity.
- Facilitated the integration of ML-based voice analysis models into Echo Talk, enabling live transcription and actionable insights during customer interactions.
- Contributed to the RParser Project by assisting in the development and training of machine learning models for resume parsing and role classification across seven predefined categories.

PROJECTS

Cryptoplace Application   **February 2025**
- Created a responsive web dashboard using React and Vite to display live cryptocurrency data, integrating the CoinGecko API for real-time price, trend, and volume updates.
- Implemented seamless navigation using React Router DOM, enhancing the user experience and maintaining a clean single-page application structure.
- Designed and integrated interactive visualizations with React Google Charts to display market trends and price movements in an intuitive format.

Supplier Management Web Application   **May 2024**
- Built and deployed a supplier management application using Oracle APEX, enabling streamlined tracking of supplier profiles, product inventory, and order history within a centralized SQL database.
- Worked on a user-friendly interface and applied database optimization techniques to improve data accessibility, reduce query times, and simplify record updates.
- Modeled an efficient ERD and schema structure to support scalable data relationships and enhance overall supply chain visibility for grocery operations.

Netflix Clone April 2024
- Engineered an interactive Netflix clone using React and Firebase, featuring user authentication, dynamic content display, and real-time data management via Firestore.
- Devised a fully responsive UI with adaptive layouts to ensure seamless usability across all devices prioritizing accessibility and consistent user experience.
- Integrated the TMDB API to fetch and render movie titles, posters, and trailers, replicating the core functionality of Netflix's content discovery experience.

PUBLICATIONS

ML based side channel power attack analysis of VLSI implementations December 2022 - May 2023
Advances in Microgrid Technologies (pages 185 - 213). Elsevier. DOI: 10.1016/B978-0-443-22187-3.00008-4
- Conducted a machine learning-based side-channel power attack analysis on VLSI implementations, leveraging Random Forest algorithms to identify vulnerabilities by analyzing hardware emissions like power usage.
- Implemented custom and ASCAD datasets to assess encryption strength against ML-based attacks. Results demonstrated robust security of custom implementation, while revealing vulnerabilities in the ASCAD dataset that enabled successful key recovery.

TECHNICAL SKILLS

- **Programming Languages:** JavaScript, HTML, CSS, Python, SQL, SwiftUI, R.
- **Tools and Frameworks:** Node.js, React, Express.js, Tailwind CSS, Bootstrap, MySQL, RESTful APIs, PostgreSQL, Firebase, Git, GitHub, Power BI, Postman, Microsoft Excel, Oracle, UI/UX Design, AWS, MATLAB, Xcode.
- **Development Practices:** API Integration, Agile Development, Continuous Integration/Continuous Deployment (CI/CD), Responsive Design, Code Quality Assurance.
- **Soft Skills:** Critical Thinking, Leadership, Creativity, Time Management, Networking, Adaptability, Communication.