# Yashwanth Raj Varadharajan

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GitHub | LinkedIn | Portfolio | Google Scholar

## SUMMARY

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

## 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.

## 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 UI from scratch in Figma 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.

## EDUCATION

**The George Washington University, School of Engineering & Applied Science (SEAS)**          **Washington, DC, USA**
Master of Science in Computer Science


**Vellore Institute of Technology, School of Electronics Engineering (SENSE)**          **Tamil Nadu, India**
Bachelor of Technology in Electronics and Computer Engineering