Yashwanth Raj Varadharajan

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GitHub | LinkedIn | Portfolio | Google Scholar

TECHNICAL SKILLS

- **Programming Languages:** JavaScript, HTML, CSS, Python, SQL, SwiftUI, R.
- **Tools and Frameworks:** Node.js, React, Express.js, TailwindCSS, MySQL, PostgreSQL, Firebase, Git, GitHub, Power BI, Microsoft Excel, Oracle, UI/UX Design (Figma), 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.

RELEVANT WORK EXPERIENCE

Parkli **California, USA**
iOS Software Developer **March 2024 – December 2024**

- Developed full-stack iOS solutions using SwiftUI and Firebase, implementing secure user authentication, backend API services, and optimizing data retrieval with Core Data.
- Led a team of 7 in building a parking reservation app, overseeing UI/UX design in Figma to SwiftUI software implementation, and making key architectural decisions for scalability.
- Streamlined development processes by establishing CI/CD pipelines using Jenkins and GitHub Actions, ensuring efficient version control and maintaining high code quality.

Access Healthcare Services **Chennai, India**
Associate Developer Intern **April 2023 - July 2023**

- Acquired practical insights in Software Engineering, Machine Learning and Robotic Process Automation while collaborating with team on Echo Applications, resulting in 40% reduction in RCM implementation time.
- Developed Echobot, a web-based RCM process automation platform, designed to automate use cases and integrate seamlessly with industry-leading frameworks.
- Played a pivotal role in the R Parser project, leading model development and training process to extract resumes and classify into 7 predefined roles aligning with candidate's profiles.

Finlatics **Mumbai, India**
Business Analyst Intern **October 2022 - December 2022**

- Leveraged dynamic analytics tools including Power BI and Microsoft Excel to extract actionable insights into consumer behavior and product preferences, empowering data-driven decision-making within organization.
- Concluded a project centered on analysis of consumer behavior data related to smartphone features, provided insights and actionable recommendations to potentially achieve a CSI score exceeding 9.

PROJECTS

Supplier Management Web Application **January 2024 - May 2024**

- Developed and deployed a user-friendly web application using Oracle APEX to streamline supplier management for a grocery store, enabling efficient management of supplier profiles, product inventory tracking, and access to order history in a centralized SQL database.
- Designed a user-friendly interface and implemented database optimization techniques to improve data accessibility and enable seamless updates, fostering stronger supplier relationships and operational efficiency.

BetterRest iOS Application **June 2024 - August 2024**

- Engineered an iOS app leveraging ML algorithms like Random Forest, Decision Tree and Linear Regression to analyze sleep data, achieving an RMSE of 170 seconds for optimal sleep time predictions.
- Streamlined data model size to 545 bytes using Create ML in Xcode, efficiently capturing key relationships between variables for fast and accurate predictions.

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 **Washington, DC, USA**
Master of Science in Computer Science

- CGPA: 3.8/4

Vellore Institute of Technology **Chennai, India**
Bachelor of Technology, Electronics and Computer Engineering

- CGPA: 3.6/4