Yashwanth Raj Varadharajan

Washington, DC 20037 | yashwanthraj6383@gmail.com | +1(202)-372-6401
GitHub | LinkedIn | Portfolio | Google Scholar

TECHNICAL SKILLS

- **Programming Languages:** JavaScript, SwiftUI, HTML, CSS, Python, SQL, R.
- **Tools:** Power BI, Microsoft Excel, Oracle, git, GitHub, UI/UX Figma, MATLAB, NodeJS, Xcode.
- **Machine Learning:** Regression, Classification, NLP, CNN, and Computer Vision.
- **Soft Skills:** Critical Thinking, Leadership, Creativity, Time Management, Networking, Adaptability, Communication.

RELEVANT WORK EXPERIENCE

Parkli **Redwood City, California**
iOS Software Developer **March 2024 - Present**

- Leading 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.
- Developing full-stack iOS solutions using SwiftUI, Firebase, and Docker, implementing secure user authentication, backend API services, and optimizing data retrieval with Core Data.
- Streamlining 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 - June 2023**

- Acquired practical insights in Software Engineering, Machine Learning and Robotic Process Automation while collaborating with team on Echo Applications, resulting in 50% reduction in RCM implementation time.
- Developed and automated Echobot, a comprehensive RCM process automation suite capable of creating on-the-go automation use cases and seamlessly integrating with various industry-leading automation 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

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.

Crop Disease Detection using Machine Learning **September 2021 - December 2021**

- Collaborated with a team of three to implement a model to differentiate between healthy and disease-afflicted crops, while concurrently classifying specific disease among a set of 6 well-known crop diseases.
- Conducted a comprehensive comparative analysis among three prominent CNN architectures - ResNet50, InceptionV3, and ResNet152V2. Assessed performance through application of accuracy and model loss metrics.

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**
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