SHWETHAA RAJESH

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EDUCATION

Carnegie Mellon University, *Masters in Software Engineering - Scalable Systems*   **Pittsburgh, Pennsylvania**
August 2024 - December 2025

PSG College of Technology, *B.Tech. Information Technology*   **Tamil Nadu, India**
CGPA: 9.23/10.0   August 2018 - July 2022

RELEVANT COURSEWORK: *Data Structures, Operating Systems, Database Management Systems, Object Oriented Programming, Software Engineering, Design and Analysis of Algorithms, Deep Learning, Java Programming, Python Programming.*

SKILLS

Languages: Python, Javascript, Typescript, Java, C#, C++, PHP, HTML, CSS, XAML
Technologies & Frameworks: React.js, React Native, Next.js, Xamarin, .NET MAUI, Express, Gatsby.js, PostgreSQL, MongoDB
Tools & Platforms: Git, Amazon Web Services(AWS), Docker, VSCode, Visual Studio, Android Studio, Chrome Devtools, Jira, Jest
Libraries: pandas, NumPy, Matplotlib, Scipy, Tensorflow, Sklearn
Methodologies & Practices: Product Development, Quality Assurance, Project Management

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EXPERIENCE

Software Development Engineer I, **Mckinsey & Company,** Bengaluru, India   August 2022 - January 2024
- Led a team of six interns and engineered a Figma plugin for design to high-quality code conversion, **reducing development time by 80%.** Ensured seamless integration and effective deployment by establishing a **CI/CD pipeline with GitHub Pages** to automate updates with each push to the main branch
- Spearheaded development of a Figma plugin in collaboration with top UI designers, creating a tool for seamless global configuration updates, **decreasing manual efforts, and expediting prototype iterations by 60%**
- Developed accessibility features, custom pull-to-refresh functionality, and precise pixel-perfect design in a real estate React Native application, ensuring exceptional performance and user experience
- Mentored and onboarded a team of 10 new hires, showcasing adaptability in working with Builder.io, a new framework, thereby **lowering ramp-up time by 25%,** and provided comprehensive documentation on setup, use cases, and best practices
- Contributed to migrating a mobile application from Xamarin Forms (C#) to .NET MAUI (C#) and then to React Native (Typescript) enhancing performance and cross-platform compatibility, **cutting down load times by 30%**

Software Development Engineer Intern, **Mckinsey & Company,** Bengaluru, India   February 2022 - July 2022
- Completed an intensive 8-week program encompassing frontend, backend, and cloud development, delivering mini applications weekly
- Worked on a project building an e-commerce furniture aggregating application employing GatsbyJS, ReactJS, and Builder.io, and contributed to the delivery of components including **product grid, featured products, and filtering and search optimization**
- Engineered and deployed design modifications within aggressive deadlines, enhancing front-end functionality and project coordination; i**ncreased user engagement by 25%** and met all project milestones on schedule
- Implemented advanced optimizations **improving search load times by 1.5x and overall performance by 3x**, earning a perfect **accessibility score of 100%**

Research Intern, **Samsung PRISM** (*Remote*), Bengaluru, India   September 2020 - November 2021
- Led the development of a deep learning neural network model using Gated Recurrent Units (GRU) and Long Short-Term Memory (LSTM) to estimate the Mean Opinion Score (MOS) for VoIP calls, achieving a **91% accuracy rate**
- Conducted data aggregation of noise recordings and merged these recordings with clean speech samples, employing a tailored algorithm for simulating varied background noise levels
- Proposed and implemented *Mel-frequency cepstral coefficients* (MFCCs) for audio signal preprocessing, a**chieved a reduction in MSE from** *0.21 to 0.167*

PROJECTS

- ***Assessing Audio Quality with Deep Learning****:* Designed non-intrusive deep learning models for VoIP MOS prediction on custom datasets with MFCC features; **attained superior accuracy of 91% with Bidirectional LSTM** and faster execution with Bidirectional GRU, showcasing competitive performance against state-of-the-art models
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- ***Classification of DBT Images for Breast Cancer Detection****:* Designed a deep learning model using ResNet and VGG models for accurate DBT image classification, contributing to early breast cancer detection with an **accuracy of 73% and an MSE of 0.18**
- ***Movie Recommender System****:* Utilized Python libraries and frameworks, applied **collaborative filtering and content-based algorithms** to construct a technically sound Movie Recommender System, and also managed end-to-end model development to improve recommendations' accuracy