

# Swathi Meghana Kolar Rajeev

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[LinkedIn](#) | [GitHub](#) | [Portfolio](#)

Software Engineer with **3 years of experience** in delivering user-first **AI-powered React/Angular interfaces** and robust **Flask/FastAPI backends** on **MongoDB/PostgreSQL**, across **AWS, GCP, and OCI**, enhancing application performance and reliability, through internships and personal projects.

## EDUCATION

### UNIVERSITY OF SOUTHERN CALIFORNIA

Los Angeles, CA | Jan 2024 – Dec 2025

#### M.S. in Computer Science (3.78/4.0)

- Coursework - Analysis of Algorithms, Web Technologies, Database Systems, Information Retrieval and Search Engines, Machine Learning for Data Science, Applied Cryptography, Advanced Mobile Devices and Game Consoles (Game Dev)
- Graduate Research Assistant at USC - conducting research on **deep learning techniques** for **Detection of Diabetic Retinopathy**. (May 2024-2025)

### VIDYAVARDHAKA COLLEGE OF ENGINEERING

Mysuru, India | Aug 2019 – May 2023

#### B.E. in Computer Science and Engineering (9.30/10.0)

- Coursework - Data Structures, Object-oriented Design, Software Engineering, Operating Systems, Computer Networks and Security
- Awarded 'Department's Best Outgoing Student (2019-2023)' as an **All-Round Achiever** in the Department of CS&E.
- Paper publications: [Okra disease detection](#) | [Cotton plant disease detection](#) | [Diabetic Retinopathy detection](#) | [Applications of HCI](#)

## WORK EXPERIENCE

### NailedIT Labs

May 2025 – Aug 2025 / Seattle, WA

#### Full Stack Developer Intern

- Delivered Consumer Booking Platform & Customer Support Dashboard in **Next.js + FastAPI** with, **<1s real-time sync** and **25% fewer no-shows**.
- Migrated **1,700+ salons & 80,000+ services** from DynamoDB to **PostgreSQL (AWS RDS)** with referential integrity and built fault-tolerant ETL pipelines from **Amazon S3**, **100% data coverage** and **95% fewer** ingestion failures.
- **Optimized** search APIs using PostgreSQL earthdistance for geo-ranking, multi-filter pagination, and image aggregation, **reducing latency by 40%**.
- Automated booking workflows with **Railway cron jobs** for reminders, notifications, and support tool sync, **reducing manual follow-ups by 90%**.
- Developed tooling & repair scripts for **17K+ image records**, ensured data integrity, validated with **Playwright/Pytest** automated testing.

### CoachEd

Sept 2022 – Oct 2022 / Bengaluru, India

#### Front-end Web Developer Intern

- Built responsive in-vehicle infotainment dashboard using **HTML5, CSS3, and JavaScript**, integrating Bluetooth, GPS, media and radio controls.
- Engineered **dynamic brightness adjustment** to reduce driver-reported distractions by **25%** and a **live clock component** in JavaScript, cutting UI update latency by **50%** and lifting user satisfaction.
- **Championed Agile best practices** - leading code reviews and paired debugging to shrink high-priority bug resolution time by **35%**.

## SKILLS

|                                   |  |
|-----------------------------------|--|
| <b>Programming Languages:</b>     | Python, C++, C, Java, JavaScript, TypeScript, Swift, Kotlin                                    |
| <b>Web &amp; Frontend:</b>        | React.js, AngularJS, Next.js, HTML5, CSS3, Tailwind CSS, Bootstrap, Figma, SwiftUI, AJAX, JSON |
| <b>Backend &amp; APIs:</b>        | Flask, FastAPI, Node.js/Express, Spring Boot, RESTful APIs, Microservices                      |
| <b>Cloud &amp; DevOps:</b>        | AWS (S3, EC2, IAM), GCP, Oracle Cloud (OCI), Docker, Kubernetes, GitHub Actions (CI/CD)        |
| <b>Databases:</b>                 | PostgreSQL, MySQL, MongoDB, DynamoDB, Supabase   |
| <b>Machine Learning &amp; AI:</b> | TensorFlow, PyTorch, Scikit-learn, Keras, OpenCV, Pandas, NumPy, SQL, Matplotlib, Seaborn      |
| <b>Testing &amp; Tools:</b>       | Git, GitHub, Jira, Postman, Pytest, Playwright, Unit Testing                                   |

## CERTIFICATIONS

- [AWS Certified Cloud Practitioner](#) | [Oracle Cloud Infrastructure AI Foundations Associate](#) | [IBM SkillsBuild: Data Structures](#)

## PROJECTS

### Real-time Weather Forecast Application | *Flask, MEAN, Swift, GCP*

Demo: [Flask](#) | [MEAN](#) | [iOS](#) 

- Developed a **responsive** web app with **MongoDB, Express, Angular, and Node.js**, plus an **iOS client in Swift**.
- Engineered a cross-platform weather app with Tomorrow.io API, improving cross-device usability by **35%**.
- Implemented smart caching and GCP deployment with auto-scaling, cutting redundant API calls by **60%**.

### Secure EHR Audit Logging System + OpenAI Chatbot | *React, FastAPI, PostgreSQL, AWS*



- Architected a full-stack solution to secure EHR access via role-based controls, while automating **Dockerized AWS deployments**.
- **Applied cryptographic standards (RSA, SHA-256, AES-128)** to ensure end-to-end audit log integrity, cutting security-related incidents by **40%**.
- **Embedded an OpenAI-powered chatbot** with dynamic **Supabase** integration, reducing manual intervention through intelligent self-service.

### Transfer Learning-Based Waste Classification System | *TensorFlow, Keras, OpenCV*



- Constructed transfer learning pipeline using pre-trained **ResNet50, ResNet101, VGG16, and EfficientNetB0** to classify nine waste categories.
- Designed **OpenCV-based augmentation and regularization** workflow with BN, dropout, and early stopping to enhance generalization.
- **Selected ResNet50 as the production model** - achieving 0.79 precision, 0.78 recall, 0.77 F1, and 0.97 AUC on the test set.

### Criminal Record Database Management System | *PHP, MySQL, XAMPP*



- Programmed and streamlined a **secure web-based CRUD system** for managing criminal records.
- Optimized **query performance** with **indexing**, improving data retrieval efficiency by **~45%**.

## OTHER ACHIEVEMENTS

- Completed **MuleSoft Training** on API Management and system integration using **AnyPoint Platform**.
- Participated in **Devfolio OnLoad 2.0 Hackathon** and presented an **Android Mobile Application – MediAssist**.
- **Team Captain** for the **Throwball Sports Team** at my Undergraduate University.