

# Padmapriya Vijayaragava Rengaraj

Los Angeles, CA, United States | padmapriya.vrj@gmail.com | +1 (657)631-7288

<https://www.linkedin.com/in/padmapriya-v-48ab1220a/> | <https://github.com/padmapriyavj> |

<https://medium.com/@padmapriyavj2604>

## Education

- California State University Fullerton, Masters in Computer Science, **GPA: 3.8**August 2024 - May 2026
- **Coursework:** Advanced Algorithms, Web backend Engineering, Artificial Neural Networks, Machine Learning, Advanced Blockchain Technologies.
- Sri Sai Ram Engineering College, B.Tech. in Information Technology, **GPA: 3.6**July 2020 - May 2024

## Technical Skills

- **Programming Languages:** Java, Python, C, JavaScript (ES6+), TypeScript, HTML5, CSS5.
- **Database:** SQL (PostgreSQL), NoSQL (MongoDB), Redis.
- **Frameworks and Tools:** React, Angular, Node.js (Express.js), GraphQL, JWT Authentication, RESTful APIs, Material-UI, PyTorch, Scikit-learn.
- **Backend and API Technologies:** API Security, ORM (Sequelize), Kafka, Performance Optimization.
- **DevOps, Cloud and Tools:** Git, AWS Cloud, Docker, Kubernetes, CI/CD(Github Actions), Data Version Control (DVC), Agile/Scrum Methodologies.

## Professional Experience

- Software Technical Consultant (Internship), DigitranIT Software Solutions Pvt Ltd – Chennai, IndiaMarch 2022 – June 2023
- Designed and launched a personalized nutrition-based meal planner app, expanding to over **1,000 users in 6 countries**, increasing retention by **10%**.
  - Developed modular backend architecture with **Node.js (Express.js)**, **optimized PostgreSQL schemas/queries** for scalability, and implemented scalable **RESTful APIs** following best practices.
  - Enhanced frontend UI/UX using Angular and real-time updates, increasing user engagement by **15%** and reducing page load times by **40%** via caching, lazy loading, and performance optimizations.
  - Secured APIs with **JWT, OAuth2-based authentication** and role-based access control (RBAC), ensuring robust authorization and authentication.
  - Developed scalable RESTful APIs with strong adherence to API design best practices (resource modeling, versioning, status codes).
  - Streamlined DevOps workflows by automating CI/CD pipelines with Docker and GitHub Actions, accelerating deployments **by 50%**.
  - **Led a 5-member Agile team**, driving sprints, code reviews, and timely, high-quality feature delivery.

## Projects

- DevOps OrchestraGithub
- Engineered an **AI-driven DevOps automation system** that reduced manual intervention by **95%** across the SDLC by orchestrating code validation, IaC provisioning, testing, deployment, and rollback via a single devops\_orchestra.yaml file.
  - Enabled autonomous agent collaboration over Kafka, achieving **80% faster deployment cycles** and **50% fewer production errors** through real-time code analysis, auto-generated tests and self-healing rollbacks.
- PulseBoardGithub
- Developing an IoT telemetry analytics platform with **React, Redux, GraphQL, Kafka, and Redis**, to achieve latency below 200ms.
  - Enhancing the UI with **React + Material-UI**, tested using **React Testing Library**, to enable intuitive dashboards for telemetry data.
  - Designing microservices with **Docker**, deploying them on **Kubernetes clusters**, and automating CI/CD pipelines to reduce setup time by **approximately 40%** and achieve **approximately 90% anomaly detection accuracy**.
- Geoshake PredictionGithub
- Built a real-time earthquake magnitude prediction system using **graph neural networks (GNNs)** and **PyTorch Geometric**, improving accuracy by **18%** compared to the baseline models.

## Publications and Patents

- An IoT System for Sitting Posture Detection using Ultrasonic Sensor and Web ApplicationAugust 2023
- Patent published by Intellectual Property India (App No: 202341057746), IC3IoT 2024 Conference.

## Certifications

- AWS Cloud Practioner Issued by AWSSept 2025
- Cloud Computing Issued by NPTEL IITMApril 2023