Pavan Kumar Ramesh

USA | (213) 574-6746 |pkumarr@usc.edu | LinkedIn |Portfolio

Education

University of Southern California
Masters in Computer Science | Los Angeles, CA — Jan 2025 - **Present**

University of Visvesvaraya College of Engineering
Bachelor of Engineering in Computer Science | Bengaluru, India — Aug 2017 – July 2021

Work Experience

SAP Labs
Full Stack Developer | Bengaluru, India — May 2022 – Dec 2024

- Led development of the Journey Page in SAP SuccessFactors Onboarding, integrating task workflows with personalized UI using SAP UI5 and RESTful API.
- Built scalable microservices-based backend components for the Dynamic Snack Layer and contributed to the Configurable New Hire release (2023 H1) using Java and Spring Boot.
- Created automated unit tests with JUnit and Mockito to ensure robust API and business logic validation.
- Adopted Cucumber for BDD and implemented ADFv2 for efficient test case orchestration and execution.

Oracle
Technical Analyst | Bengaluru, India — Jan 2021 – May 2022

- Developed internal financial tools using Oracle APEX and PL/SQL for Oracle GBF (Global Business Finance), enabling UI-driven workflows for cost center and project management.
- Automated RBAC-based access provisioning and improved financial compliance tracking by 30%.
- Supported OCI migration of GBF applications, optimizing complex SQL queries and ETL workflows for cloud-based financial reporting systems.

NSquare Softwares
Web Development Intern | Bengaluru, India — Aug 2019 – Sep 2019

- Contributed to development of an e-Commerce web application using Java Servlets, MySQL, HTML/CSS, jQuery, and AWS.
- Created reporting dashboards using Power BI.

Projects

Energy Efficient Routing Protocol using Computation Intelligence — May 2020

- Designed ML-based routing protocol using MATLAB, fuzzy logic, and LEACH to optimize energy use in wireless networks.
- Implemented a dual cluster head selection mechanism to improve load balancing and extend overall network lifetime.
- Developed and evaluated the protocol using simulation-based performance metrics, demonstrating increased energy efficiency over traditional methods.

Artsy — April 2025

- Built full-stack web and Android app using Angular, Node.js, and Jetpack Compose for web and Android.
- Integrated user authentication, Gravatar profiles, and REST API-based real-time search.
- Deployed on GCP (Cloud Run, Firebase), with MongoDB Atlas as backend.

Transfer Learning for Image Classification — April 2025

- Built multi-class image classifier using ResNet50, VGG16, and EfficientNetB0 on TensorFlow.
- Applied data augmentation, dropout, and batch normalization to boost generalization.
- Tuned using Adam optimizer; evaluated with F1 score, AUC, and accuracy metrics.

Technical Skills

Languages: Java, Python, C, C++, C#, PL/SQL
Machine Learning & Data Science: Supervised learning, transfer learning (ResNet50, VGG16, EfficientNet), SVM, decision trees, k-NN, bootstrapping, model evaluation (F1, AUC, cross-validation), hyperparameter tuning, TensorFlow,Pandas, Keras, scikit-learn.
Databases: Oracle DB 19c, MySQL, MongoDB, SQLite.
Cloud Technologies: Oracle Cloud, SAP S/4HANA, Google Cloud.
Technologies: HTML, CSS, JavaScript, Angular, Jetpack Compose, Bootstrap, Node.js, React, Restful API, Docker, Git, Docker, Kafka.