

Durga Shankar

+1(305)-807-6502 | durga.k.developer@gmail.com | [Portfolio](#) | [Linkedin](#) | [Github](#)

EDUCATION

M.S in Computer Science - George Mason University <i>Statistical Machine Learning, Advanced Mathematics for CS, Deep Learning, Computer Vision, Real-Time System Design, Software Testing and Quality.</i>	Sept 2024 – May 2026 Fairfax, VA
B.Tech in Computer Science and Engineering - KL University <i>Embedded Machine Learning, Neural Networks, Statistics, Database, Robotics, Data Science, OS, Computer Architecture, IOT Architecture</i>	Jul 2020 – Apr 2024 Vijayawada, AP

PROFESSIONAL EXPERIENCE

Graduate Teaching Asst - Cloud & AI Infra IT 442 <i>George Mason University (AWS, Azure, GCP)</i>	Jan 2025 - Present Fairfax, VA
<ul style="list-style-type: none">Mentored 200+ students on AWS, Azure, GCP like AWS BigQuery, EC2, AWS CDK, Lambda, Azure OpenAI, Docker, and GC Functions, Vertex AI delivering hands-on lab experiments.Published 31 technical resources for system design, distributed system patterns, and Kubernetes orchestration tutorials with weekly office hours, increasing student engagement.	
Software Development Engineer <i>Paytm (Contract) (Python, SQL, React, Django, AWS, Docker)</i>	Aug 2023 - Aug 2024 Noida, India
<ul style="list-style-type: none">Boosted mobile conversions by 24% by contributing to P90 load times reduction from 1.9s to 800ms by engineering a centralized Django Redis caching layer and implementing React Native code splitting.Resolved dashboard timeouts and reduced query execution times to 500 ms by analyzing and optimizing execution plans of complex SQL queries for AWS Redshift data pipelines.Reduced frontend regression bugs in Q2 2024 and accelerated feature delivery velocity by 20% by architecting reusable component libraries for 35+ modules, enforcing strict 80% Jest test coverage.Achieved 98% build success and cut release cycles by 33% by designing shared CI/CD pipelines for 160+ microservices using Jenkins, GitHub Actions, and SonarQube quality gates.	

Software Engineering Intern <i>AICTE (Python, Scikit-learn, Classification ML, React, Node.js)</i>	Jan 2023 - June 2023 Mumbai, India
<ul style="list-style-type: none">Developed an automated ticket classification system using Scikit-learn to process 100K+ records, achieving 95% accuracy and reducing manual task effort by 70%.Optimized API response times by 65% for a SARIMA-based forecasting microservice by refactoring XML parsing logic in Node.js to improve data ingestion efficiency.	

PROJECTS

AI-Native Serverless Job Tracker [GitHub] Go, GCP, Gemini 2.5, React, TailwindCSS	
<ul style="list-style-type: none">Architected an SaaS product on Google Cloud that piping Gmail webhooks through Pub/Sub to a Go microservice, utilizing Gemini 2.5 flash to parse unstructured email semantics and sync real-time application status to a Firestore-backed React dashboard.	
Regex Backtracking Visualizer [Demo] HTML, CSS, React, TypeScript, AST Parsing	
<ul style="list-style-type: none">Developed a React/TypeScript visualizer that exposes regex engine internals, rendering step-by-step recursive backtracking and AST parsing to demonstrate the mechanics of pattern matching execution.	
NLU Code Explainer LLM [GitHub] Python, Llama 2, QLoRA, PEFT	
<ul style="list-style-type: none">Fine-tuned Llama 2 using QLoRA and AST-based feature extraction to generate human-readable code explanations, improving semantic accuracy by 20% over base benchmarks.	
CLIP-based Image Understanding [GitHub] PyTorch, ViT-B/32, Mask R-CNN	
<ul style="list-style-type: none">Implemented text-to-image retrieval and zero-shot classification utilizing cosine ranking and OOD (Out-of-Distribution) abstention mechanisms, achieving Recall@1=0.91 on CIFAR-10.	

TECHNICAL SKILLS

Languages: Python, Java, C++, JavaScript, TypeScript, SQL
Frameworks: React, React Native, Node.js, Django, Spring Boot, GraphQL
Cloud & DevOps: AWS (Lambda, DynamoDB, EC2), Docker, Kubernetes, Jenkins, CI/CD
Certifications: AWS Developer Associate, Oracle Cloud Infrastructure, Red Hat Enterprise Developer, Azure az-900