

AMRITSAI SIVASUBRAMANIAN

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Legal Status: US Citizen

EDUCATION

University of California, Irvine Irvine, CA
Master of Computer Science Expected Dec 2026
Relevant Coursework: Algorithms, Data Structures, Machine Learning and Data Mining, Artificial Intelligence

Vellore Institute of Technology Vellore, India
Bachelor of Technology in Computer Science and Engineering Jun 2021 - Jul 2025
Relevant Coursework: Software Engineering, Database Systems, Cloud Computing, Computer Networks

EXPERIENCE

Software Development Intern Coimbatore, India
Bluebasket Labs Dec 2024 - May 2025
- Migrated client-facing legacy .NET monolith to Microsoft IIS cloud architecture, boosting system uptime by **30%** and slashing memory footprint by **50%** through optimized resource allocation.
- Architected full-stack AI-powered SaaS platform using Next.js, Node.js, Supabase, Anthropic APIs to digitize operations for **15+** small-scale Indian vendors, automating manual service management.
- Engineered CI/CD pipelines and automated monitoring workflows using Docker and cloud-native tools, reducing deployment maintenance overhead by **20%** and ensuring zero-downtime scalability.

AI Development Intern Coimbatore, India
Better Lives Aug 2023 - Dec 2023
- Developed production RAG-based conversational assistant using Python, RASA, and OpenAI embeddings, reducing average query resolution time by **40%** and deflecting **60%** of Tier-1 support tickets.
- Enhanced retrieval accuracy by **35%** through LlamaIndex integration with hybrid search across **10,000+** inventory documents, improving context relevance for complex supply chain queries.
- Deployed NLP automation pipeline integrating the assistant with client's legacy ERP inventory system, enabling natural language querying for **200+** daily active warehouse operators.

PROJECTS

SAP AI Supplier Sourcing Optimizer - Keystone Project | Java, SAP S/4HANA, SAP BTP Jan 2026 - Present
- Leading a 4-member UCI team to build an SAP-sponsored procurement optimizer that processes **50,000+** S/4HANA purchase records and recommends lowest total-cost suppliers across tariffs, logistics, and lead times.
- Designed and implemented constrained optimization algorithms that balance cost minimization with supplier capacity limits, quantifying projected savings across base price, tariff exposure, and inventory holding costs.
- Developing SAP BTP dashboards that visualize OTIF vs. lead time trends and compare historical versus optimized allocations, enabling data-driven sourcing decisions for procurement stakeholders.

Penny Wise | Python, SpaCy NLP, GoLang, PostgreSQL, React Native, Docker Feb 2024
- Architected full-stack NLP expense tracker using SpaCy NER and classification pipelines, reducing manual entry time by **60%** through natural language processing of unstructured text inputs.
- Trained and deployed SpaCy text classification model achieving **92%** accuracy across 8 expense categories, enabling automatic transaction categorization without predefined templates.
- Engineered scalable microservices backend with Go, PostgreSQL, containerized via Docker, supporting cross-platform mobile deployment on React Native with **sub-200ms** API response times.

Railway Track Damage Detection using Deep Learning | [Engineering Research Express](#) Feb 2024
- Developed CNN-based computer vision system for automated railway safety inspection, targeting large-scale rail network deployment with real-time damage detection capabilities.
- Curated and augmented **12,000-image** dataset to resolve **3:1** class imbalance, applying rotation, scaling, and synthetic generation to improve model generalization across diverse track conditions.
- Benchmarked 7 CNN architectures (VGG, Inception, ResNet variants), selecting ResNet50 with **95.42%** validation accuracy.

SKILLS

Languages: Python, Go, Java, JavaScript, TypeScript, C, C++, SQL, R, HTML, CSS
Frameworks: React.js, Node.js, Next.js, Flask, FastAPI, RASA, NumPy, Pandas, scikit-learn, TensorFlow, PyTorch, YOLO
Databases & Tools: PostgreSQL, MongoDB, Firebase, Supabase, AWS (S3, EC2), Docker, Git, Postman, Microsoft IIS, CI/CD, Vercel