# SHYAM KANNAN

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## SUMMARY

AI/ML Engineer and Full-Stack Developer specializing in reinforcement learning, computer vision, and scalable cloud systems. Experienced deploying ML models to production and building end-to-end applications with measurable business impact.

## TECHNICAL SKILLS

**ML/AI & Data Science:** PyTorch, TensorFlow, scikit-learn, Reinforcement Learning, Deep Learning, Computer Vision, NLP, FinBERT, Gymnasium, Neural Networks, Keras, MLOps, Pandas, NumPy, Matplotlib

**Programming Languages:** Python, JavaScript, TypeScript, Swift, Java, C++, C, SQL, HTML, CSS

**Web & Mobile Development:** React.js, Next.js, Angular, Node.js, Express.js, Flask, SwiftUI, REST APIs, GraphQL, WebSockets, JWT, TailwindCSS, Prisma

**Cloud, DevOps & Databases:** AWS (EC2, Lambda, ECS, S3), Docker, Kubernetes, CI/CD, Git, GitHub Actions, Linux/Unix, PostgreSQL, MongoDB, Redis, Supabase, Elasticsearch, Agile/Scrum

## EXPERIENCE

**Kashmir World Foundation** | *AI Engineer Intern*                    Jun 2023 – Aug 2023

- Developed end-to-end computer vision pipeline for snow leopard detection, processing 10K+ drone images with 90%+ accuracy using YOLOv8 and custom ResNet models, deployed on AWS Lambda
- Optimized model inference with TensorRT quantization, reducing latency by 65% for edge deployment on resource-constrained field devices
- Engineered data preprocessing pipeline with augmentation techniques improving model generalizability by 20%+ across diverse environmental conditions

**Enverus** | *Software Engineer Intern*                    Jun 2022 – Aug 2022

- Redesigned mobile UI with React/Angular using lazy loading and code splitting, reducing bounce rate by 15% and increasing session duration by 25% across 40K+ monthly users
- Implemented 12 RESTful API endpoints with Node.js/Express using JWT authentication and rate limiting, serving 40K+ daily requests with <250ms response time
- Established CI/CD pipeline with GitHub Actions and Docker, reducing deployment time by 20% while maintaining high system reliability

## KEY PROJECTS

**Hierarchical RL Portfolio Management** | *Python, PyTorch, Gymnasium* | github.com/aditya-chawla/portfolio-manager

- Engineered 3-tier hierarchical RL system achieving 74.79% annualized returns with 2.89 Sharpe ratio, outperforming baseline 2.66x while reducing max drawdown from -15.62% to -9.86%
- Implemented dual-stream architecture combining 56-dim market data with 35-dim Reddit sentiment (FinBERT), training specialized agents with meta-learning coordination, backtested on 3 years across 10 portfolios

**LessGo - Smart Carpooling Platform** | *Swift, Node.js, PostgreSQL* | github.com/shyam-kannan/SJSU_Ridesharing

- Leading iOS development for ML-enhanced university carpooling with live GPS tracking and microservices backend designed to scale for 500+ SJSU students
- Developing ML-based rider-driver matching with collaborative filtering projected to reduce search time by 60%, plus anomaly detection for safety monitoring and homomorphic encryption for privacy-preserving routes

**Finance Companion - AI Expense Tracker** | *React, TypeScript, Next.js* | github.com/shyam-kannan/finance_tracker

- Created full-stack finance app with automated receipt processing using Google Vision OCR and Gemini LLM achieving 90%+ categorization accuracy, integrated Twilio alerts and Google Calendar API for payment reminders

## EDUCATION

**San Jose State University** | M.S. Artificial Intelligence | GPA: 3.58                    Aug 2024 – May 2026

**Arizona State University** | B.S. Computer Science | GPA: 3.53                    Aug 2020 – May 2023

**Certifications:** AWS Certified Cloud Practitioner (2023) • Deep Learning Specialization (Coursera)