JAYAKISHAN B

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PROFESSIONAL SUMMARY

Pre-final year B.Tech IT student with strong interests in AI, Machine Learning, Agentic AI Systems and Full-stack Development, eager to apply hands-on experience in building intelligent systems. Focused about developing explainable ML models and scalable applications across healthcare, cybersecurity and automation domains. Recognized through national-level competitions and successful project deployments. Actively seeking opportunities to learn, grow and contribute AI/ML engineering skills to solve real-world problems in collaborative, high-impact teams.

EDUCATIONAL QUALIFICATION

Sri Ramakrishna Engineering College – B.Tech Information Technology 2023 - 2027
CGPA: 8.44/10 (till 5th semester)

SBOA Matriculation and Higher Secondary School – HSC 2022 - 2023
Percentage: 81.89%

EXPERIENCES

AI and Cloud Intern – Edunet Foundation and IBM SkillsBuild Sept 2025 - Oct 2025

- Completed intensive 4-week virtual internship executing 5+ hands-on cloud labs covering end-to-end AI workflows: data preprocessing, model training with scikit-learn/TensorFlow, containerized deployment using Docker, real-time monitoring, and CI/CD pipeline integration
- Earned IBM SkillsBuild certification covering complete AI lifecycle including exploratory data analysis, feature engineering, supervised/unsupervised learning, cloud deployment strategies on AWS/Azure, and production model maintenance

Mobile App Development Intern – Resilience Business Grids LLP Dec 2024 - Jun 2025

- Built and deployed Flutter-based intelligent chatbot with Dart backend supporting multimedia uploads, contextual responses, and real-time synchronization, handling 100+ concurrent queries and reducing manual support workload by 30% through automated intent classification and routing
- Designed scalable cross-platform architecture with REST API integration, Firebase authentication and data persistence, designed for seamless expansion across production-scale web and mobile platforms

PROJECTS

AI-Powered ICU Patient Flow Coordinator *GE HealthCare - Consultancy Project*

- Designed and deployed intelligent ICU bed allocation system as team lead using ensemble ML models, achieving 78% accuracy with Logistic Regression (L2) after rigorous 5-fold cross-validation across 5,000 patient records
- Improved triage decision accuracy by 25-30% and reduced approval bottlenecks through predictive modeling of patient admission priority using key clinical features (lactate, GCS, vitals)
- Developed full-stack web application with FastAPI backend, SQLite database, and Next.js 15 frontend with TypeScript, enabling real-time patient flow predictions and actionable insights for clinical staff
- Technologies: Next.js 15, TypeScript, FastAPI, Logistic Regression (L2), Scikit-learn, Pandas, NumPy, SQLite

SREC Utsava 2026 - Symposium Platform *College Project*

- Led a 2-member team in the development of a production-ready full-stack platform with integrated ICICI Bank payment gateway, user authentication, and event management, successfully serving 12,000+ visitors with 98,000 page views
- Architected responsive UI/UX with server-side rendering for optimal performance and SEO, achieving 90+ Lighthouse scores across all metrics
- Technologies: Next.js 15, TypeScript, Tailwind CSS, Supabase (PostgreSQL), Framer Motion, Bank API

AI-Driven Drug Discovery and Genomic Analysis Framework *InnoHack'26 VIT Vellore - Finalist*

- Coordinated 4-member multidisciplinary team to build explainable AI framework for drug-target interaction prediction and genomic variant analysis, advancing from 900+ teams to top 21 finalists in AI/ML track
- Engineered ensemble ML pipeline combining Random Forest, XGBoost, and Gradient Boosting with RAG-based LLM explanations and SHAP-driven feature importance analysis for interpretable predictions from scientific literature retrieval
- Technologies: Python, FastAPI, Next.js 15, TypeScript, Random Forest, XGBoost, Gradient Boosting, SHAP, RAG, PCA, K-means

Explainable AI Driven MLOps framework for Fair and Inclusive Loan Advisory *Team Project*

- Spearheaded 3-member team to develop end-to-end MLOps framework for fair and inclusive loan advisory, achieving 30-40% improvement in user trust through SHAP-based explanations and counterfactual analysis, with research paper submitted to IJARCS (Volume 17, Issue 1, 2026)
- Architected dual-model production pipeline with automated retraining, fairness monitoring (Demographic Parity, Equal Opportunity), drift detection using KL Divergence, and RAG-based AI assistant for dynamic RBI guidelines and government scheme recommendations
- Technologies: Next.js 15, TypeScript, FastAPI, Python, XGBoost, SHAP, SMOTE, RAG, Supabase, MLOps

AI-Driven Nocturnal Elephant Detection and Deterrence System *Hackathon Winner - 25000 INR*

- Implemented YOLOv8n-based wildlife detection system on Raspberry Pi achieving 90%+ accuracy in low-light conditions, with automated deterrence mechanisms including buzzer alerts and range-based LED warning indicators
- Integrated multilingual SMS and voice call alert system via Twilio API with real-time monitoring dashboard for forest department coordination, enabling immediate response to wildlife intrusions
- Technologies: YOLOv8n, Python, OpenCV, Raspberry Pi, IoT sensors, Twilio API, Buzzer, LED indicators

AI-Powered Cyber Triage System for Real-Time Threat Detection (First Project) *Team Project*

- Directed 3-member team to engineer real-time DoS/DDoS detection and prevention system using Random Forest classifier achieving 80% accuracy, with automated IP blocking/unblocking via Windows Firewall API, reducing incident response time by 40%
- Implemented network traffic analysis pipeline using Wireshark/TShark packet capture with Flask backend and SQLite database for storing attack patterns, coupled with alert generation for suspicious activity detection
- Technologies: Python, Random Forest, Flask, Scapy, Wireshark, TShark, Windows Firewall API, SQLite, HTML, CSS

HACKATHONS & AWARDS

- Finalist – InnoHack'26 (VIT Vellore) – Selected among top 21 teams from 225+ nationwide entries in AI/ML track
- Certificate of Recognition – GE HealthCare Consultancy – AI-powered ICU Patient Flow Coordinator
- 1st Place – Human-Animal Conflict Hackathon – AI-Driven Nocturnal Elephant Detection and Deterrence System (Rs.25000 cash prize)
- Winner – Innovators Icon Award, Hack24 – AI-powered Lung Disease Prediction System
- 1st Place – Protovision, Technovate 2025 – AI-Powered Cyber Triage System for Real-Time Threat Detection

TECHNICAL SKILLS

- **AI/ML:** TensorFlow, PyTorch, Scikit-learn, Agentic AI, YOLOv8, LLMs, RAG, Explainable AI, MLOps and Computer Vision
- **Programming Languages:** Python, Java, C, C++, MySQL
- **Web Development:** React, Next.js, Node.js, FastAPI, Flask, Tailwind CSS, REST APIs
- **Databases & Cloud:** MySQL, PostgreSQL, Supabase
- **DevOps & Tools:** Docker, Git/GitHub, CI/CD, Linux

CO-CURRICULAR ACTIVITIES

- Executive Member – Research and Innovation for Student Empowerment (RAISE), SREC
- Executive Member – Computer Society of India (CSI) Student Branch, SREC
- Executive Co-Chairperson – Road Safety Vertical, YI Yuva Club, SREC (2024-2025)
- Active Member – Phorartz Club (Photography & Arts), SREC

DECLARATION

I hereby confirm that the information provided above is accurate and true to the best of my knowledge.

JAYAKISHAN B