

# B S Rohit

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AI/ML and Full-Stack Developer with extensive hands-on experience in designing, developing, and deploying scalable AI-driven and software solutions. Skilled in computer vision, NLP, deep learning, cloud technologies, and full-stack development, with a strong foundation in algorithms, data structures, and system design. Proven track record of delivering high-impact projects in industrial and research settings, optimizing ML pipelines, and developing real-time applications. Recognized for innovation, problem-solving, and technical excellence through hackathon wins, publications, and successful industrial internships.

## Education

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**SRM Institute of Science and Technology**, B.Tech in Computer

Jun 2022 - May 2026

Science Engineering with specialised in Artificial Intelligence

and Machine Learning

- CGPA: 9.15

**Velammal Vidhyalaya, Theni**, Grade-12

June 2021-April 2022

- Marks - 90%

**The Little Kingdom Senior School**, Grade-10

June 2019-April 2020

- Marks - 91%

## Professional Experience

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**Intel® Unnati Industrial Training (Image Sharpening using Knowledge Distillation)**

May 2025 - July 2025

- Designed student-teacher pipelines for lightweight image sharpening using Knowledge Distillation.
- Improved inference speed while preserving perceptual quality in vision tasks.
- Conducted experiments to evaluate model performance across multiple datasets, optimizing for efficiency and accuracy.

**Research Intern – CVRDE (DRDO), Avadi** (*Vehicle Detection and Classification using R-CNN and SSD*)

June 2024 - July 2024

- Developed real-time detection system using SSD and R-CNN, achieving 95% accuracy.
- Optimized pipeline to achieve 30% faster inference under diverse conditions.
- Used Faster R-CNN with ResNet-50 backbone for precise classification.

**Artificial Intelligence Intern – Infosys Springboard** (AI-Driven Guest Experience Personalization)

Dec 2024 - Feb 2025

- Built FastAPI-based hospitality platform with DistilBERT and PyTorch for real-time sentiment analysis.
- Implemented a recommendation engine with scikit-learn using sentiment, behavior, and loyalty tier.
- Designed admin dashboard (Pandas, Matplotlib, Seaborn) with Slack alerts; containerized deployment using Docker.

## Projects

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**NET-ARMOR**, Cybersecurity and AI-powered Security Automation

- Developed full-stack system using Flask (backend) + React (frontend) with core functions including domain scanning, vulnerability detection, password auditing, and risk scoring.
- Integrated AES-256 encryption, JWT authentication, TOTP-based 2FA; deployed as a Dockerized PWA on Vercel.
- Enabled real-time security alerts and interactive dashboard for vulnerability monitoring.

**Smart Energy Distribution and Monitoring Grid System, IoT + ML**

- Built IoT-powered grid using ESP32, solar energy panels, and sensors for real-time voltage, current, and power monitoring.
- Developed forecasting models with CatBoost, XGBoost, LightGBM, achieving  $R^2$  up to 0.9971.

- Core functions include anomaly detection, live visualization using ThingSpeak, and automated energy usage reporting.

### **Development and Evaluation of Speech Recognised Voice Bot**, Full Stack ML

- Created NLP-based speech recognition system using Python, PyTorch, and SpeechRecognition APIs with 98% real-world accuracy.
- Core functions: real-time voice command processing, response generation, and multi-context conversation handling.
- Published and presented research at IEEE ICSES 2023, receiving recognition for innovation.

### **SmartChat Multilingual Ticketing System for Museums**, Full Stack Web

- Developed a multilingual ticketing platform using React (frontend) + Express (backend) + MongoDB (database) for seamless booking and management.
- Core functions: ticket booking, multilingual support (3+ languages), real-time availability check, and booking history tracking.
- Improved booking efficiency by 40% and enhanced user accessibility.

## **Skills**

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**Programming & Core CS:** Python, C/C++, Java, Data Structures & Algorithms, OOP

**AI/ML:** TensorFlow, PyTorch, Scikit-learn, NLP, LLMs, Deep Learning, Computer Vision, Speech Recognition

**Web & Full-Stack:** HTML, CSS, JavaScript, React, Express, Flask, FastAPI, REST APIs, Docker, Vercel

**Cloud & Databases:** Azure, MySQL, MongoDB, Serverless Deployment

**Tools & DevOps:** Git/GitHub, CI/CD, Unit Testing, Pandas, Matplotlib, Seaborn

## **Certifications**

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- Microsoft Certified: Azure Data Scientist Associate
- Microsoft Certified: AI Fundamentals
- Microsoft Certified: Azure Database Administrator Associate
- Salesforce: Cloud & SaaS Skills
- GitHub Foundations

## **Soft Skills**

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Problem-Solving || Analytical Thinking || Communication || Leadership || Team Collaboration || Adaptability || Time Management || Critical Thinking || Attention to Detail || Research & Innovation

## **Achievements**

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- Winner of **Capture the Flag 2024** organised by Computational Intelligence department, SRMIST
- Winner of **LLM Healthcare Hackathon 2025** organised by Computation Technologies department SRMIST in association with Directorate of Entrepreneurship & Innovation (DEI) and Institution's Innovation Council
- Co-authored and presented the paper "**Deep Residual Neural Network-based Video Recommendation through Facial Expression Recognition**" at ICICSCS 2023 and "**Prediction and Diagnosis of Cardiovascular Disease Using Cloud and Machine Learning**" at the Springer 7th International Conference on Intelligent Computing and Communication 2024.