NIRANJAN P N

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SUMMARY

Entry-Level ML Engineer | AI/ML Student | CV & DL Focus
pre-final year AI/ML student with hands-on experience in computer vision and deep learning. Led 3 ML projects with **85–92% accuracy**. Skilled in integrating models into real-world apps using Next.js. Passionate about building smart, usable AI solutions and always ready to innovate.

AWARDS & CERTIFICATIONS

Design patent granted for innovative *"Baby Chair with Airbag" enhancing child safety* — *Aug 2024*
Completed AWS Cloud Practitioner Essentials Certification – Amazon — *Feb 2025*
Completed "Introduction to Cloud Computing" by IBM on Coursera — Jul *2024*
Earned Microsoft Azure Fundamentals Certification — *Jun 2025*

TECHNICAL SKILLS

Core ML: TensorFlow, Object Detection (YOLO, DETR), OpenCV
Programming: Python (Pandas, NumPy), Java, C++, SQL/
Web Development: React, Next.js, REST APIs (Postman, Swagger)
Tools: Tableau, Excel, Agile, System Design, Google Collab

PARTICIPATIONS

1. **Smart India Hackathon-2024 -** Participated in Internal Hackathon for SIH-2024 and Proposed the Solution - An AI based Tool for Translating Indian Sign Language gestures from a Recognized Speech
2. **Real-Time Credit Risk System at IIT Madras Hackathon** -Participated in a 24-hour INDUSTRI AI hackathon at IIT Madras, building a real-time credit risk assessment system with a focus on data pipeline and risk scoring.
3. **MSME Idea Hackathon -** Built an autonomous robot that converts animal waste into organic fertilizer using composting, anaerobic digestion, and vermicomposting. The system automates waste processing, produces biogas for energy, and delivers customized, nutrient-rich fertilizers—promoting sustainable and efficient farming.

EDUCATION

Sri Krishna College of Technology	**B.E. in Artificial Intelligence and Machine Learning** | CGPA: 7	*2023 - 2027*
Kamaraj Matric Hr. Sec School	**Higher Secondary Education** | Grade: 75%	*2022 - 2023*
Kamaraj Matric Hr. Sec School	**Secondary Education** | Grade: 70%	*2020 - 2021*

TECHNICAL PROJECTS

AI-Powered Plant Disease Detection System | ML, Computer Vision, TensorFlow.js, Next.js, Full-Stack *2024*

- Built a web-based app for real-time plant disease detection using TensorFlow.js with **92.4%** accuracy.
- Trained 3-class model for identifying healthy leaves, powdery mildew, and leaf spot using 2400+ annotated images.
- Designed mobile-first interface with Next.js and Tailwind CSS, enabling offline use in the field.
- Deployed on Vercel with optimized model quantization for low-latency browser inference.

AI-Powered Automation Agent | *AI Integration, Browser Automation, DeepSeek-R1, Google API* *2025*

- Developed an AI agent using DeepSeek-R1 and Gemini to automate web tasks like online shopping with **97.45%** confidence rate.
- Enabled real-time task handling such as navigating websites, extracting data, and interacting with API
- Built scalable automation pipelines with Google API keys, supporting smart task routing and cloud compatibility.

Speech to ISL Translator using Speech Recognition & NLP Techniques| Python, Google Translate API, Natural Language *2024*

- Developed an AI tool to convert spoken language into **Indian Sign Language (ISL) gesture videos**.
- Utilized **speech recognition** to transcribe audio input into text.
- Applied **NLP techniques** for text preprocessing and keyword extraction.
- Mapped processed text to a gesture video dataset, displaying corresponding **ISL signs** in real-time.
- Aimed to bridge the communication gap for hearing-impaired individuals using automation and AI.