

KARTHIK M

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[Email](#) | [LinkedIn](#) | [GitHub](#) | [LeetCode](#) | [Portfolio](#)

PROFESSIONAL SUMMARY

Computer Science and Engineering undergraduate with an 8.51/10 CGPA and hands-on experience developing full-stack applications and AI-driven software solutions. Research experience in offline conversational AI for edge devices and Deep Reinforcement Learning. Interested in software engineering, backend development, and intelligent systems, with projects spanning regulatory compliance, placement readiness, and library management.

EDUCATION

Vidyavardhaka College of Engineering
B.E. in Computer Science and Engineering

Mysuru, Karnataka
CGPA: 8.51/10

RESEARCH EXPERIENCE

PRISM – Offline Conversational AI

2026

First Author / Research Paper

ICIDTSM 2026, IIT Madras

- First author of a research paper investigating fully offline conversational AI for resource-constrained edge devices.
- Developed a hybrid architecture combining contextual reasoning, layered conversational memory, lightweight semantic retrieval, and TinyLlama-1.1B inference.
- Research paper accepted for presentation at ICIDTSM 2026, IIT Madras.

Deep Reinforcement Learning Research

2026

Research Paper / PPO-Controlled NPCs

IEEE Xplore

- Contributed to evaluating Proximal Policy Optimization (PPO) against a Finite State Machine (FSM) baseline for non-player character (NPC) behavior.
- Worked on reward-function components and comparative evaluation metrics to assess reinforcement-learning-based NPC behavior against a rule-based baseline.

PROJECTS

MANAKSETU | *Next.js, React, TypeScript, FastAPI, Python, OCR*

[GitHub](#)

- Built an AI-assisted Legal Metrology compliance platform that extracts packaged-product declarations from labels and validates them against configurable regulatory rules.
- Designed an OCR-to-compliance workflow with evidence-backed findings, inspector verification, and automated PDF report generation.

SmartPRS | *Next.js, TypeScript, Supabase, AI*

[GitHub](#)

- Developed an AI-powered placement-readiness platform covering aptitude, coding, core technical skills, soft skills, and attendance for engineering students.
- Designed readiness scoring, personalized AI coaching, company eligibility predictions, and placement analytics for students and faculty.

BookSphere | *Next.js, TypeScript, Supabase, PostgreSQL*

[GitHub](#)

- Developed a full-stack college library management system supporting book discovery, borrowing requests, and library inventory management.
- Implemented student and administrator dashboards with authentication, role-based access, borrowing approvals, and PostgreSQL Row Level Security (RLS).

LEADERSHIP & ACTIVITIES

Cerenetics

Present

Co-Founder / Software Solutions Startup

[LinkedIn](#)

- Co-founded a software solutions startup focused on developing custom software systems and modernizing existing business technology.

Hackathons & Technical Competitions

Participant

- Participated in Hack-A-League 4.0, Hack-Olympic, Parivarthan 2026, and Symbiot, gaining experience in collaborative problem-solving and technical project development.

V-Vision Buildathon & Math Penta Fest

Competition Achievements

- Received Best Performance recognition at the V-Vision Buildathon.
- Secured first place at Math Penta Fest for pitching the winning idea in the ideathon.

TECHNICAL SKILLS

Languages: Java, Python, C, JavaScript, TypeScript, SQL, HTML, CSS

Web / Backend: React, Next.js, FastAPI, Flask

AI / ML: Scikit-learn, TinyLlama, Ollama, OCR, Deep Reinforcement Learning

Databases: PostgreSQL, SQLite, Supabase

Tools: Git, GitHub, Docker, VS Code, IntelliJ IDEA, Raspberry Pi