# NAGA ADARSH

SDE | Full Stack | AI/ML
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## SUMMARY

Final-year B.Tech IT student in Chennai, graduating 2027. Builds full-stack and AI systems in Python and React: a MobileNetV2 model behind a published patent application, a FAISS and ColBERT retrieval engine, and a Redis-cached URL shortener. Seeking SDE, full-stack or AI/ML internships or full-time roles.

## TECHNICAL SKILLS

Languages: Python, Java, SQL, JavaScript, TypeScript
Backend and APIs: FastAPI, Flask, Spring Boot, REST APIs, serverless functions
Frontend: React, Next.js, HTML, CSS
Machine learning and computer vision: TensorFlow, Keras, CNNs, MobileNetV2, OpenCV, model evaluation
Information retrieval and LLM: FAISS, ColBERT, Sentence Transformers, Gemini API
Databases and caching: MySQL, Redis (Upstash)
Tools and platforms: Git, Docker, Linux, Vercel
Core computer science: data structures and algorithms, debugging, cross-browser testing

## EXPERIENCE

**Freelance Web Developer, SubbaiH Tuition & Daycare** Sep 2025 - Oct 2025 | Chennai
- Built a five-page site in HTML, CSS and JavaScript for a Chennai tuition and daycare centre.
- Handled requirements and delivery directly with the owner; paid engagement of INR 10,000.
- Deployed to static hosting and handed over written documentation for the owner.

**Web Developer, Eagle Hi-Tech Softclou Pvt Ltd** Jun 2025 - Jul 2025 | Chennai
- Gathered client requirements and built three sites: two responsive HTML/CSS, one React app.
- Built React components with state management and CSS layouts; checked cross-browser output.

## PROJECTS

**AI-Based Freshness Indicator | Patent Application IN202641004962 A1** 2026 | Demo | Source Code
- Trained a MobileNetV2 CNN on 3,000+ fruit and vegetable images; 92% F2 on the evaluation set.
- Added shelf-life decay modelling; the score falls with age and triggers a spoilage alert.
- Deployed behind a Flask API with OpenCV preprocessing and a React upload page.
**Stack:** Python, TensorFlow, Keras, OpenCV, Flask, React

**Scholar RAG Engine | Retrieval-Augmented QA** 2026 | Source Code
- Combined FAISS candidate retrieval with ColBERT-style late-interaction scoring over research papers.
- Added a cross-encoder reranker, which raised answer precision by 30-40% in my evaluation.
- Served it with FastAPI; Gemini API writes answers from the retrieved passages.
**Stack:** Python, FastAPI, FAISS, Sentence Transformers, ColBERT, React

**Nag-Link URL Shortener** 2026 | Demo | Source Code
- Built a URL shortener with custom slugs: React and TypeScript front end, FastAPI service, Upstash Redis.
- Redirects resolve in under 100 ms on Vercel; Redis caching cut lookup time by about 60%.
**Stack:** React, TypeScript, FastAPI, Redis (Upstash), Vercel

## EDUCATION

**B.Tech in Information Technology, Easwari Engineering College** 2023 - 2027 (expected)
Chennai | GPA: 8.3/10

## ACHIEVEMENTS & CERTIFICATIONS

- Published patent application IN202641004962 A1 for AI-based freshness detection.
- Azure Developer Associate, Microsoft certified (certificate); Cisco CCNA 1-3, Networking Academy.
- Smart India Hackathon 2024 and 2025, college-level finalist.
- LeetCode 730+ problems | CodeChef Division 2, 1700+ | Codolio 870+ across platforms