# RESUME ——————

**Yadunandan S**

Computer Science Engineering

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yadunandan28

**Yadunandan28 - LeetCode Profile**

## Objective:

Computer Science undergraduate passionate about building intelligent, scalable systems at the intersection of AI and software engineering. Strong problem solving mindset with hands-on experience in developing data-driven applications that integrate machine learning, secure backend architectures, and seamless user experiences. Seeking to contribute to innovative teams by delivering practical, high-impact AI-powered software solutions.

## Education:

**Bachelors in Computer Science and Engineering | 2022-2026**

Kumaraguru College of Technology – CGPA 7.25(up to 7$^{th}$ sem)

**HSC | 2020 – 2022**

Kids Club Higher Secondary School – 96.83%

**SSLC | 2020**

St.Joseph Higher Secondary School – 79.2%

## Soft Skills:

- Communication
- Adaptability
- Teamwork
- Critical Thinking
- Problem Solving
- Leadership
- Creativity & Design

## Technical Skills:

- Python,C++,JavaScript
- MERN , REST APIs, Socket.io, JWT Authentication
- MySQL,MongoDB, ChromaDB
- Scikit-learn, TensorFlow, NLP, RAG Architecture, HuggingFace Embeddings
- Streamlit, Tailwind CSS, Zustand, Cloudinary
- LangChain, Ollama
- Data Structures & Algorithms, OOP, SDLC, System Design Basics

## Projects:
### Chatify – Real-Time Chat Application
**Tech Stack:** React, Node.js, Express, MongoDB, Socket.io, JWT, Tailwind CSS, Zustand
Built a production-ready real-time chat application using the MERN stack with a focus on scalability, performance, and security. Implemented JWT-based authentication and real-time bi-directional communication using Socket.io, including online/offline presence tracking. Integrated Cloudinary for image uploads and Resend for automated email notifications. Applied API rate limiting with Arcjet to enhance security and prevent abuse. Designed clean RESTful APIs and deployed the application on Render with optimized free-tier resource usage.
**Skills Gained:** Full-Stack Development, REST API Design, Real-Time Systems, Authentication & Authorization, State Management, Socket-io integration, Cloud Deployment

### PDF Chatbot using RAG Architecture
**Tech Stack:** Python, LangChain, Ollama (Gemma2), ChromaDB, HuggingFace, Streamlit
Built an end-to-end Retrieval-Augmented Generation (RAG) system to query insights from multiple unstructured PDF documents. Designed a semantic chunking and vector embedding pipeline using HuggingFace models and ChromaDB for efficient similarity search. Integrated LangChain with a local LLM (Gemma2 via Ollama) to generate context-aware responses while minimizing hallucinations. Deployed an interactive Streamlit interface, enabling real-time document querying across 10+ PDFs.
**Skills Gianed:** Generative AI, RAG Pipelines, Vector Databases, Semantic Search, LLM Integration, NLP Engineering

### Passive CAPTCHA System for Bot Detection
Developed a machine learning–driven CAPTCHA system to differentiate legitimate users from bots by analyzing interaction metrics such as typing speed, latency, and click precision. Incorporated a behavior-based scoring model (TensorFlow, Scikit-learn) with secondary verification through Drag & Drop CAPTCHA and honeypot traps. Backend implemented using Node.js and MongoDB for real-time detection and adaptive learning.
**Skills Gained:** Machine Learning, Behavioral Analysis, Security Systems, Backend Development, Real-Time Processing

## Certification:
- **Data Mining Foundations and Practice Specialization** (Coursera)
- **HTML5 CSS3 Javascript**(Infosys Springboard)
- **Agile Scrum in Practice** (Infosys Springboard)
- **AWS Academy Cloud Foundation** – AWS

## Personal Interest
- Listening to Podcasts
- Reading Books & Articles
- Sports & Fitness
- Chess

## Languages Known
- English
- Hindi
- Telugu
- Tamil

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