

Yuvraj Singh

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Professional Summary

Highly motivated Computer Science undergraduate with strong fundamentals in object-oriented programming, cloud-based development, and data-driven AI systems. Proven experience in developing scalable full-stack and GenAI projects, solving 150+ algorithmic problems, and working collaboratively in agile teams.

Education

Vellore Institute of Technology, Bhopal, Bachelor of Technology in Computer Science Engineering

Aug 2022 – Mar 2026

- CGPA: 7.93/10.0

Technologies

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

Frameworks/Libraries: TensorFlow, PyTorch, FAISS, LangChain, LangGraph, Streamlit, PyQt

Tools: Git, GitHub, Jupyter, Linux

Databases: MySQL, MongoDB

Practices: Agile, RESTful APIs, Design-Driven Development

Cloud & DevOps: Docker, AWS (EC2, S3, Lambda), Git, GitHub

Projects

YouTube Transcript Summarizer & Q&A System | Python, FAISS, Streamlit, LangChain

- Integrated Google Gemini LLM via LangChain to generate context-rich answers
- Achieved <3s response time using FAISS vector search and Gemini embeddings.
- Secured API key input through runtime entry (no .env usage) for enhanced privacy.
- **Github** github.com/Yuvraj-ai/Youtube-Video-Summeriser

AutoCar - Self-Driving Car Model | Python, TensorFlow

- Built a network Convolution (CNN) model for steering angle prediction using Nvidia's research.
- Applied OpenCV-based augmentation on 500+ images; achieved 94% test accuracy.
- Integrated the model into a simulated environment for real-time decisions.
- **Github** <https://github.com/Yuvraj-ai/AutoCar>

SmartMerge – AI-Powered GitHub Branch Merge Assistant | Python, PyQt5, PyGithub, Gemini API

- Collaborated on building a desktop assistant that connects to GitHub repositories and analyzes differences between branches.
- Integrated Gemini API to generate AI-driven merge recommendations and flag potential conflicts proactively.
- Designed a PyQt5-based GUI for intuitive repo/branch selection and merge operation management.
- **Github** github.com/Yuvraj-ai/SmartMerge

Certificates

Generative AI using **IBM Watsonx** – IBM Career Education Program

GitHub Foundations Certified – Proficient in commits, branching, markdown, collaboration

Prompt Design in Vertex AI Skill Badge by **Google**

Extracurricular Activities

Solved 150+ problems on Leetcode, specializing in algorithms, dynamic programming, and graph theory.

Participant – SECVIT 2024: Tech Problem Solving and puzzle cracking competition - Ranked top 20