

PURNIMA SAHOO

Bhopal, Madhya Pradesh

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Education

VIT Bhopal University

Bachelor's in Computer Science and Engineering (B.Tech)

2022 – 2026

CGPA : 8.44

Technical Skills

Programming Languages: C/C++, Python, JavaScript, HTML, CSS

Web Development & Development Tools: React JS, Streamlit, Flask, Tailwind CSS, Framer Motion, GSAP, Vanta JS, Three JS, Git, GitHub, Figma, Canva, Jupyter Notebook

Generative AI & LLMs: HuggingFace Transformers, LangChain, Gemini, LLama, PaLM2, Fine-Tuning Techniques, Retrieval-Augmented Generation (RAG)

Deep Learning: Computer Vision, PyTorch, TensorFlow, Keras, OpenCV

Machine Learning: Scikit-learn, XGBoost, SVM, Random Forest **Software Engineering:** Data Structure and Algorithms, Object-Oriented Programming, Database Management Systems

Leadership

Linux Club

Research and Development Lead

Feb 2024 – Nov 2024

VIT Bhopal University

- Analyzed data for social media publications, boosting the club's popularity by 10%, and managed a team of 4+ members, improving research quality and scope by 5%.
- Conducted in-depth research on data trends by analyzing audience preferences and engagement metrics.

Cyber Warrior Club

Research and Development Lead (Formerly Core Member)

July 2023 – June 2024

VIT Bhopal University

- Directed a research project with a team of 7 members, fostering excellent collaboration through effective communication.
- Implemented streamlined workflows and regular progress reviews, which improved overall work efficiency by 4%. This resulted in timely project completion and high-quality deliverables.

Projects (github.com/Purnima2004)

SkillCraft | ReactJS, Tailwind CSS, HuggingFace Transformers, GenAI

<https://course-craft-front.vercel.app/>

- Designed an adaptive learning platform powered by LLM-based content generation using HuggingFace Transformers for dynamic response creation, improved efficiency by 10%.
- Enhanced web application performance by integrating JavaScript and Vite, reducing load times and boosting responsiveness by 10%.

Auto ML Solution | Python, Flask, Git, Streamlit

<https://automl-solution-for-all.streamlit.app/>

- Built an automated machine learning pipeline that evaluated multiple machine learning algorithms with an of 90% accuracy.
- Tested the pipeline on 10+ real-world datasets and deployed the solution using Streamlit, enabling an interactive web interface with real-time predictions and a user-friendly experience.
- Explored expansion with LLM-generated access logs summaries and alert messages as a future enhancement feature.

AI Assistant | Python, LangChain, Groq API, OpenCV

<https://github.com/Purnima2004/AI-Assistant>

- Developed a multilingual AI assistant capable of processing voice commands in English and Hindi, leveraging LangChain with Groq API for zero-shot intent detection and reasoning.
- Implemented specialized assistants (Reading, Walking, Navigation) with contextual task routing using LangChain-driven logic chains. Added a fallback keyword detection mechanism for robust intent resolution in cases of LLM failure

Achievements

- Smart India Hackathon 2023:** Qualified after excelling through three internal rounds among 500+ participants.
- PredProp Hackathon:** Competed in a 24-hour event with 30+ teams, fostering teamwork and rapid prototyping skills.
- Coding Aptitude:** Achieved a 1500 rating on competitive coding platforms, recognized as a Top Performer in the "Introduction to C++" course by Coding Ninjas with a 94% score (2023), and solved 500+ programming challenges on platforms like LeetCode.
- NPTEL Swayam (IIT Kharagpur):** Earned an Elite Silver badge in Cloud Computing with a 75% score, ranking in the top 5% of 20,000+ participants.
- Coursera:** Completed the IBM AI Engineering Specialization, gaining expertise in machine learning and AI development frameworks.