PURNIMA SAHOO

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Education

VIT Bhopal University   **2022 – 2026**
Bachelor's in Computer Science and Engineering (B.Tech)   *CGPA : 8.52*

Experience

SWE Co-Op Intern | AlgoUniversity (YC S21)   *July 2025 – Sept 2025*

- Engineered an Online Judge web application for users to write, compile, and execute code with test case verdicts.
- Integrated **Google's Gemini API** to deliver intelligent code analysis and feedback across **3** programming languages, reducing code submission latency to **5s**.
- Deployed production system on **AWS using EC2** for compute and **ECR** for container image management, with containerization and secure sandboxing.
- Learned System Design from Senior Engineers from **Google**, **Apple**, **Grab Singapore** and **Microsoft**, prepared high level and low level design document.
- **Deployed Link**   **GitHub Link**

Projects

AI Assistant | *Python, LangChain, Groq API, OpenCV*   *Dec 2024 – Jan 2025*

- Developed a multilingual AI assistant capable of processing voice commands in English and Hindi.
- Implemented specialized assistants (Reading, Walking, Navigation) with contextual task routing using LangChain.
- Added a fallback keyword detection mechanism for robust intent resolution in cases of LLM failure.
- Enhanced accessibility by enabling integration with IoT devices designed for visually impaired users.
- **GitHub Link**

Auto ML Solution | *Python, Joblib, Pillow, Seaborn, Streamlit*   *Mar 2023 – Nov 2023*

- Engineered an Automate Machine Learning platform (AutoMl Solution) to eliminate manual algorithm rewriting, reducing model development time by **75%** and streamlining machine learning workflows for production environments.
- Built preprocessing pipeline using **Column Transformer** and **scikit-learn Pipeline** classes, included **PCA** dimensionality reduction and created interactive visualization dashboard with **Plotly/Seaborn** for real-time model monitoring.
- Orchestrated **15+** algorithms, handling real-world data challenges, providing production ready model outputs.
- **Deployed Link**   **GitHub Link**

Technical Skills

Programming Languages: C/C++, Python, JavaScript(basics)
Machine Learning & Deep Learning: TensorFlow, PyTorch, Keras, Scikit-learn, XGBoost
NLP & Computer Vision: Hugging Face Transformers, NLTK, OpenCV, YOLO
Dev Tools & Platforms: Git, GitHub, Jupyter Notebook, Streamlit, LangChain
Additional: HTML, CSS, React.js, Tailwind CSS, Django, Sqlite, MySQL (Basic)

Extracurricular Activities

Research and Development Lead | *Linux Club, Cyber Warriors Club*   *Jan 2024 – Dec 2024*

- Spearheaded cross-functional R&D initiatives across 2+ diverse teams, demonstrating strategic leadership.
- Reviewed weekly performance reports and audience demographics to plan monthly content calendars, while conducting bi-weekly team meetings to track project milestones and resolve bottlenecks.

Smart India Hackathon | *University Qualified Finalist*   *Nov 2023 – Dec 2023*

- Built a fraudulent profile detection system for social media, securing pre finale selection from 500+ teams.
- Collaborated effectively with a team of 4 members, applied robust machine learning algorithms that significantly improved detection accuracy and system performance.

Achievements

- **Programming:** Achieved an overall rating of 1500+ on competitive coding platforms.
- **Coding Ninjas:** Recognized as a Top Performer in the "Introduction to C++" course with a 94% score.
- **IBM AI Engineering Specialization (Coursera):** Achieved an overall score of 88.02% in the certification.