

MRIDUL

Software Developer and AI & Machine Learning Engineer | Data Science

+91 9805432908 | mridulku225@gmail.com | [LinkedIn](#) | [GitHub](#) | [Portfolio](#)

PROFESSIONAL SUMMARY

Innovative B.Tech Computer Science Graduate and AI & ML Developer with hands-on experience in building data-driven applications, agentic workflows, and end-to-end machine learning pipelines. Currently advancing AI Initiatives as an Intern at NIELIT Ropar, contributing to India AI technical activities through robust Python development and data curation. Combines deep technical proficiency in software deployment and web frameworks with practical IT administration skills, including computer networking, hardware troubleshooting and system maintenance. A proven campus leader and technology ambassador dedicated to driving open-source contributions and community-driven tech solutions.

EXPERIENCE

AI/ML Intern

February 2026 – Present

NIELIT Ropar | Ropar, Punjab

- Building and deploying end-to-end AI and machine learning pipelines, while actively supporting the technical activities and initiatives of India AI.
- Facilitating technical training initiatives for both teachers and students, conducting practical lab sessions on AI tools, and managing all associated program data.
- Managing IT infrastructure for CCC examinations, including client-server setup, network configuration, and ongoing hardware troubleshooting.

Campus Leader

2026 – Present

Hack Byte-Codex | Government College Dharamshala

- Leading Hack Byte-Codex, a student-driven tech community focused on helping students learn, build skills, and connect with developers.
- Organizing workshops and webinars on emerging technologies including AI/ML, Web Development, and Open Source.
- Building a collaborative environment that bridges academics and industry-ready technical skills for college peers.

Google Student Ambassador

October 2025 – April 2026

Google Gemini Student Program | Government College Dharamshala

- Facilitated engagement campaigns and technical workshops to drive adoption of Google Gemini and Generative AI across campus.

PROJECTS

AI-Powered Proctored Examination Platform | [Python](#) · [Flask](#) · [OpenCV](#) · [Media Pipe](#) · [Socket.IO](#) · [JavaScript](#)

- Developed a server-side AI proctoring system optimized for low-resource devices by shifting heavy computation to the backend.
- Built a Python/Flask backend with Media Pipe achieving 94% accuracy in detecting gaze deviation and impersonation.
- Created a thin-client interface using JavaScript and Socket.IO for smooth video streaming and instant lag-free alerts.

Digital Gram Samadhan Portal | [Live Demo](#)

[Python](#) · [Flask](#) · [MongoDB](#) · [Sarvam AI](#) · [Socket.IO](#) · [JavaScript](#)

- Engineered a multimodal rural e-governance platform featuring AI-powered voice-to-text grievance registration, supporting 9 regional languages to overcome user literacy barriers.
- Developed a secure Python/Flask backend and scalable MongoDB NoSQL database, implementing strict Role-Based Access Control (RBAC) and automated 7-day SLA escalation for delayed complaints.
- Built a responsive, mobile-first interface using JavaScript and Jinja2, integrating Socket.IO for real-time dashboard updates and Cloudinary for secure, optimized media storage

NIELIT Smart Entry System | [Live Demo](#)

[Python](#) · [Flask](#) · [Computer Vision \(QR\)](#) · [Docker](#) · [JavaScript](#)

- Engineered a secure QR-code-based access control and visitor management system for NIELIT Ropar to streamline facility entry and eliminate manual logging bottlenecks.
- Developed a robust Python/Flask backend with strict role-based access isolation, featuring real-time IN/OUT tracking, manual visitor ID capture, and automated day-wise CSV data exports.

- Built a responsive, role-separated scanner interface integrating live camera feeds for instant QR verification, and deployed the production-ready application utilizing Docker and Gunicorn.

Multi-Crop Disease Detection and Advisory Platform | [Python](#) · [Flask](#) · [TensorFlow](#) · [Efficient Net B0–B3](#) · [Scikit-learn](#)

- Built a scalable platform covering 8 regional crops; trained Efficient Net (B0/B2/B3) models reaching 80–90% accuracy.
- Handled class imbalance using class weights; developed a lightweight Flask + Tailwind CSS + JS interface for instant diagnoses and advice.

Sales Forecasting for a Retail Chain || [Live Demo](#)

[Python](#) · [SQL](#) · [Regression](#) · [EDA](#) · [Matplotlib](#) · [HTML/CSS](#) · [JavaScript](#)

- Developed a forecasting system with SQL data extraction, Python EDA for trend/seasonality analysis, and ML models (Linear Regression, Random Forest, XGBoost).
- Built an interactive Flask dashboard visualizing insights, model metrics, and actionable sales forecasts for stakeholders.

TRAINING & CERTIFICATIONS

- Full-Stack Mobile App Development using Flutter & REST APIs - CDAC Mohali , June – July 2026
- Gen AI Nasscom – FSP, May 2026
- Fundamentals of VLSI Design under PMKVY – NIELIT Ropar , April 2026
- Python Developer Certification about 300 Hours – freecodecamp.org , January 2026
- Data Science Using Python – SmartED Innovations Ltd , September 2025
- Fundamentals of Data Curation using Python -NIELIT Ropar , June 2025
- DSA using Python – mysirg.premium , October 2024
- Complete Python Bootcamp – Zero to Hero , Udemy

EDUCATION

Bachelor of Technology in Computer Science Engineering
Government College Dharamshala (HPTU) | CGPA: 7.34

August 2022 – June 2026

12th Class – Non-Medical
GSSS Daroh (HPBOSE) | GPA: 92.8%

April 2021 – March 2022

SKILLS

Languages & Core : Python , C++ , HTML, CSS , JavaScript, React

ML/AI Frameworks : Scikit-learn, TensorFlow, Keras, Pandas, NumPy, Matplotlib, Seaborn, NLP, Computer Vision

Generative AI & LLMs: HuggingFace, Transformers (BERT, GPT, LLaMA), LangChain, RAG Pipelines

Web Frameworks: Flask, Django, Streamlit, FastAPI

Database: MySQL , MongoDB , VectorDBs

Tools & Cloud: Git, Jupyter Notebook, Google Colab, Docker, Cloudinary, Google Search Console, Hugging Face ,Render