Sanidhya Shandilya

7300007659 sanidhyashandilya13@gmail.com linkedin.com github.com Portfolio

EDUCATION

Bachelor of Technology (BTech) in Computer Science and Engineering Sep 2022 – Expected July 2026 | Jaipur, India
Specialization in Artificial Intelligence and Machine Learning (AIML)
Manipal University Jaipur
- **CGPA** | 9.52

WORK EXPERIENCE

The LNM Institute of Information Technology: LUSIP Internship May 2023 – Jul 2023
Project Intern
- Worked on the Project entitled, **"Smart Street Light Monitoring System"**improving system reliability by 30%.
- Hands-on experience on working with **GSM Modules**, Arduino, **LoRa** and available **Sensors**.
- Engineered a user-friendly interface **Tinker cad** reducing setup time by 40% and integration online data displaying on The **Things Network**.

PROJECTS

Satellite Image Segmentation Feb 2025
(ongoing)
- **Enhanced Geospatial Analysis:** Utilized deep learning algorithms (U-Net and DeepLabV3) to improve land cover mapping, environmental monitoring, and urban planning, enhancing the accuracy and efficiency of geospatial data analysis.
- **Automated Image Classification:** Implemented a system for pixel-wise classification of satellite imagery into 25 distinct land cover categories, achieving accurate segmentation of complex geographical features.
- **Geospatial Data Processing:** Developed a robust pipeline for processing and analyzing high-resolution satellite images, enabling detailed interpretation of land cover types and supporting informed decision-making in various applications.
- **Technical Skills:** Proficient in Python, U-Net, DeepLabV3, PSPNet, semantic segmentation techniques, data preprocessing, and model evaluation metrics with models trained on a curated dataset of annotated satellite imagery.

Smart CCTV Surveillance System Feb 2024 – Apr 2024
- Enhanced CCTV Networks: Utilized AI/ML algorithms to improve crowd management, crime prevention, and monitoring, increasing operational efficiency by 30% in high-traffic areas.
- Real-Time Video Analysis: Implemented features for crowd tracking, facial recognition, and weapon detection, achieving 85% accuracy in facial recognition and reducing response time to potential threats by 40%.
- Security and Monitoring: Developed systems for monitoring crowd behavior, identifying security threats, and recognizing individuals and objects, leading to a 25% reduction in security breaches and enhancing situational awareness in real-time.
- Technical Skills: Proficient in Python programming, YOLOv8 (with course-to-fine block), custom dataset development, OpenCV, and Face Recognition, with models trained on over 3000+ images to ensure robust performance in diverse environments.

AI-driven precision agriculture and crop management system Sep 2023
- **Innovative Solutions:** Experienced in developing advanced agricultural solutions using AI and data analytics, resulting in a 20% increase in crop yield accuracy.
- **Empowering Farmers:** Provided precise resource allocation and sustainable farming recommendations to over 500 farmers, improving resource efficiency by 30%.
- **Eco-Friendly Practices:** Leveraged technology to secure food production and promote environmentally friendly practices, reducing chemical usage by 25% and water consumption by 15%.

Technical Skills: Python programming,Data Science libraries:(Pandas, NumPy, Matplotlib),Seaborn for machine learning, data visualization and analysis, Decision Tree, K-fold cross Validation.

Smart Street Light Monitoring System May 2023 – Jul 2023
- **Objective:** Developed a system to modernize outdated street lighting in urban and rural areas.
- **Key Technologies:** Utilized light and motion sensors, GSM modules for remote control and fault reporting, increasing system reliability by 30%
- **Innovations:** Implemented real-time data collection and analysis using Wi-Fi and LoRa modules for efficient maintenance and reduced energy consumption by 25%.

Technical Skills: Sensor integration, GSM module programming, real-time data analysis, Wi-Fi and Loran module utilization, system design and implementation.

KEY COURSES TAKEN

Data Structure, Algorithms, RDBMS, Machine Learning, Artificial Intelligence, Operating System, OOPs, NLP, Computer Network, Fundamental of Data Science.

SKILLS

- Programming: Python, C/C++, HTML, CSS, SQL.
- Frameworks/Technologies: TensorFlow, Power BI, Power Query, DAX, Matplotlib, Scikit-learn, Seaborn, MS office,Angular, OpenCV, YOLOv8.
- Fields: ML, IoT, Data Management, Prompt Engineering, DSA.

AWARDS

2nd in Project expo Nov 2024
organized by Department of CSE-AIML , MUJ

Silver Elite Badge in NPTEL Design and Analysis of Algorithms Sep 2024

1st in Im-prompt-O Hackathon Sep 2023
(48hrs Hackathon) by MUJ ACM Chapter