



**Nivesh Pritmani**  
Roll No.:21BIT001  
BTech  
Information and Communication Technology  
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🔗 [GitHub Profile](#)  
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Experience

Research Intern

Bhaskaracharya Institute of Space-Applications and Geoinformatics(BISAG-N),Gandhinagar

May 2024 - Aug 2024

- Developed and implemented **AI-powered precision support systems** for Agriculture, Forestry, and Fire Management.
- Technologies Used:** Python, TensorFlow, Keras, Roboflow, QGIS, Google Earth Engine.
- Improved data accuracy by 40% and reduced analysis time by 30%.**
- Built and fine-tuned Deep Learning models (**Unet, DeepLabV3, Detectron2, YOLOv8/v9**) for object detection, classification, segmentation, and measurement in Geospatial imagery.
- Orchestrated Python-based workflows for data preprocessing, model training, and evaluation, handling large-scale TIFF image datasets.
- Leveraged **Roboflow** for annotating datasets, **SAM** geospatial for predictive models, and **QGIS** and Google Earth Engine for geospatial analysis.

Technological Skills

Programming Languages:	Java(DSA), Python(AI/ML)
Web Technologies:	HTML, CSS, Bootstrap, JavaScript
Cloud Technologies:	AWS (EC2, S3, LAMBDA, CloudFormation), Docker(Basic)
Machine Learning:	TensorFlow, Keras, Scikit-learn, Numpy, Pandas
Databases:	MySQL, Hadoop Framework
Data Structures:	Array, Linked-List, String, Stack, Queue, Map, Set
Tools & Concepts:	OOPs, Unit Testing(JUnit), RESTful API, Linux

Projects

- BookWise** : Comprehensive Library Management System ([Github Link](#))  
Flask, Bootstrap, SQLite, Bcrypt, Google Books API
- Developed a comprehensive Library Management System using **Flask, Bootstrap, SQLite**, and **Google Authentication** to streamline book inventory management, user interactions, and transaction processes..
  - Streamlined book inventory management, user interactions, and transaction processes.
  - Created **RESTful APIs** for updation of book details and user profile details.
  - Implemented secure user authentication and authorization using Google Authentication and **Bcrypt**.
  - Designed a user-friendly interface for seamless book searching, borrowing, returning, and browsing recommendations.
  - Incorporated a robust notification system for due dates, new arrivals, and overdue books.
  - Generated insightful reports on book usage, overdue items, and user activity.
- IoT-Based Surveillance System** ([Github Link](#))  
Python, Flask, Raspberry Pi, PIR sensor, Camera module, React
- Developed a real-time surveillance system with a focus on motion detection and person recognition using Raspberry Pi.
  - Programmed the Raspberry Pi in Python to interface with PIR sensors and capture images upon motion detection.
  - Integrated the system with a Flask backend for processing images and performing face recognition using the `face_recognition` library.
  - Implemented a React-based frontend for real-time monitoring and visualisation of detected individuals, enhancing user experience.
  - Incorporated a robust notification system for alerts.
- AI QUIZ Backend**: Microservice ([Github Link](#))  
Python, Flask, Flask-JWT, Flask-SQLAlchemy, MySQL, Google Generative AI, Docker
- Implemented JWT-based authentication for secure user access.
  - Integrated **Google Generative AI** for dynamic quiz generation.
  - Designed REST API endpoints for real-time scoring, quiz retries, and history retrieval.
  - Deployed using Docker for scalable and efficient deployment.

Education

<b>Pandit Deendayal Energy University</b>	Gandhinagar,Gujarat
<i>B.Tech in Information and Communication Technology , CGPA:9.62</i>	<i>October 2021-May 2025</i>

Achievements

- **Finalist** in **Odoob Combat 2024 Hackathon** (Top project among **600+** submissions) [Diet Recommendation System](#).
- Leetcode (Max. Rating 1613) Solved **250+** DSA problems, **Top 26.64%** globally.

Co-Curricular

<b>Campus Placement Student Coordinator</b>	April 2023-Present
<i>CDC Cell, PDEU</i>	

