



## EDUCATION

Year	Degree/Exam	Institute	CGPA/Marks
2026	M.TECH	IIT Kharagpur	9.24 / 10
2022	Bachelor of Technology	Mahatma Phule Krishi Vidyapeeth, Rahuri, Maharashtra.	8.06 / 10
2018	Higher Secondary Certificate	Maharashtra State Board	83.69%
2016	Secondary School Certificate	Maharashtra State Board	93%

## INTERNSHIPS

**R & D Intern: QuantaSIP Informative Solutions Pvt Ltd.**

[May 2025-July 2025]

- Developed an **interactive geospatial analytics dashboard** for real-time KPI visualization, EDA, and Business decision-support, enabling insurance risk analysis and reporting automation

- Engineered **ML based** feature pipelines and applied DL super-resolution model to upscale sentinel-2 imagery, improving quality for predictive analytics

**Intern (LUP Division): ICAR- National Bureau of Soil Survey & Land Use Planning, Nagpur.**

[Jan2022-Jun2022]

- Performed ETL based geospatial data preprocessing, feature extraction and terrain analytics using ArcGIS, QGIS, SAGA GIS, and GEE to build Digital soil mapping datasets for modeling and decision reporting

- Contributed to a **Government-funded project**, Nanaji Deshmukh Krishi Sanjivani Prakalp (PoCRA), with a strong focus on soil mapping, sustainable land resource management, and long-term agricultural productivity improvement, benefited to 4000+ villages to improve agricultural productivity

**Intern: Albedo Foundation, Nashik.**

[Jun 2020-July 2020]

- Conducted **RS and GIS workflows** including raster processing, spatial querying, and georeferencing using QGIS, enhancing accuracy in spatial datasets

## PUBLICATIONS

•Pranjali D. Patil, Nitin G. Patil, &Atul A. Atre. (2023). **Estimation of Soil Loss using RUSLE, GIS, and Remote Sensing: A Case Study of Sangli District, Maharashtra.** *Journal of Agricultural Engineering (India)*, 60(3), 297-310. <https://doi.org/10.52151/jae2023603.1815>

•Pranjali D. Patil, Vaishnavi Joshi, Subhadip Dey (2025). **Waterbody Mapping Using Modified 3-Component Model-based Decomposition of TerraSAR-X Data** (Accepted to Publish -IGRASS 2026)

## COURSEWORK INFORMATION

Microwave Remote Sensing | Technopreneurial Marketing | Consumer Happiness and Wellbeing | Water Quality Management Practice

## PROJECTS

**Decadal Changes of Biomass Carbon Stock in the Indo-Gangetic Mangrove Area: Insights from Landsat Remote Sensing. | Guide: Prof. Subhadip Dey (M.Tech Thesis)**

[ Jun 2025-Present]

- Conducted **multi-temporal regression analysis** on Landsat dataset using python and ML models for decadal carbon stock estimation

- Quantified **time series trends, feature importance and predictive patterns** to generate actionable climate analytics insights

**Shrimp Disease Early Warning System (Self Project)**

[Aug 2025-Present]

- Built an end-to-end **ML pipeline with data cleaning, feature engineering, and ensemble models on multi-parameter dataset** to enable predictive risk scoring using cross-validated evaluation metrics

- Deployed a Streamlit analytics application delivering real-time prediction dashboards with **99+ classification accuracy** to support proactive aquaculture decision making

**Land Use Land Cover Change Detection Using GEE, Remote Sensing and GIS. (Self-Project)**

[Jan2022-April 2022]

- Conducted **LULC change detection** with Google Earth Engine, ArcMap, and remote sensing techniques, integrating multi-temporal imagery

- Applied **geospatial feature engineering and ML-based classifiers** to improve accuracy in monitoring and mapping land cover transitions

**Adoption of Hydroponics as a Sustainable Organic Farming Practice | Guide: Prof. Mamoni Banerjee (Academic Project: Technopreneurial Marketing)**

[Feb 2025-Mar 2025]

- Researched the **impact of economic, environmental, and productivity factors** using rigorous survey methods and multivariate statistical analysis

- Provided **data-driven opinions on hydroponics** as a sustainable farming method and developed policy and strategic guidelines for implementation

## SKILLS AND EXPERTISE

**Area of Interest:** Remote Sensing | GIS | Environmental Monitoring | Machine Learning | Data Analysis | Spatial Analysis | Data Science | Gen AI

**Programming Languages:** Python | SQL **Libraries/ Frameworks :** Pandas | Numpy | Matplotlib | Seaborn | Scikit Learn | Streamlit | Optuna

**Data Analysis:** EDA | Data Cleaning | Feature Engineering | Statistical Analysis **Machine Learning:** Supervised Learning, Classification Models, Ensemble Models, Cross-Validation, Model Evaluation **Software and Tools:** ArcMap | QGIS | Google Earth Engine | Google Earth Pro | Power BI | Jupyter Notebook | VS Code | Anaconda | MS office **Soft Skills:** Problem Solving | Critical Thinking | Communication | Leadership | Management | Teamwork | Creative Writing **Linguistic Skills:** English | Hindi | Marathi | Japanese (Basic)

## CERTIFICATIONS

Python, GUVI | Introduction to Excel, Coursera | Business Analyst and Process Management, Coursera | JLPT N5, Japanese Language Teachers' Association of Pune | Computer Intelligence Olympiad, Central Board of IT and vocational training

## AWARDS AND ACHIEVEMENTS

- Recipient of the prestigious Sharad Pawar Inspire Fellowship in Agriculture (2022), awarded for an innovative research idea.

- Secured an All-India Rank 221 in the GATE 2024 conducted by IISc Bangalore for masters admission

## POSITIONS OF RESPONSIBILITY

- Head and compiler of college magazine (Marathi Section) | UG
- PG Mentor | Student Mentorship Program, Student Welfare Group, IIT Kharagpur
- General secretary of mess | UG
- Member of Event Organization committee | UG
- Teaching Assistant, IIT Kharagpur

## EXTRA CURRICULAR ACTIVITIES

- Winner of 1st Prize at Inter-College Elocution Competition and selected as the University Representative at the National Level
- Served as volunteer under the National Service Scheme (NSS), coordinating community development activities and mentoring fellow volunteers
- Appointed Parade Captain of the Scout Cadet Team, demonstrating leadership, discipline, and organizational skills in managing team
- Volunteered for the Digital India initiative during Kshitij 2025 at IIT Kharagpur, contributing to awareness and outreach activities on digital empowerment