

# Satyamkumar Jha

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## Professional Summary

Detail-oriented Geomatics postgraduate with a strong foundation in geospatial technologies, GIS, remote sensing, and machine learning. Proven experience in environmental modeling, infrastructure monitoring, and spatial data visualization. Passionate about leveraging technology for sustainable urban planning and environmental assessment.

## Education

### CEPT University

M.Tech, Geomatics. **GPA: 4.5**

- Focus on geospatial technologies, GIS, and environmental modeling

Ahmedabad, Gujarat

Jul 2024 - Present

### Gujarat Technological University (GTU) (ITM Universe)

B.E., Civil Engineering. **CGPA: 9.46**

- Thesis on "Structural vibration control using Tuned mass damper".
- Merit scholarship winner, year 2017-2018, 2018-2019.

Vadodara, Gujarat

Jul 2016 - Aug 2020

### M.G.M. School (GSEB)

Higher Secondary Certificate Exam (12th) - 75.65 percentile

Secondary School Certificate Exam (10th) - 92.23 percentile

Halol, Gujarat

Jun 2014 - Mar 2016

Jul 2013 - Mar 2014

## Projects

### Forecasting Air Pollutant Levels Using Geospatial Technologies

- Developing a predictive model to forecast PM 2.5 values for Mumbai city.
- Using multiple machine learning models to compare the best for forecasting.
- Analysing the urban environmental impact of Air Pollution Using Geospatial Technology.

CEPT University

Jan 2024 - April 2025

### Assesing Desertification: Mapping Spatial Extent

- Developed a Desertification Vulnerability Map for Giridih District, Jharkhand.
- Utilized remote sensing data to asses the trends for 2013 -2023 by employing different indices such as BSI, MSAVI, TGSI, TCI and slope and generated Desertification Vulnerability Index (DVI) using weighted overlay analysis.
- Validated results using ISRO's Desertification Atlas.

CEPT University

Jul 2024 - Dec 2024

## Experience

### Junagadh Municipal Corporation

Trainee Civil Engineer

- Monitored STP & UGD projects (Zones 8,9), conducted daily site inspections.
- Map 60+ borewells, hand pumps, and pumping stations using a Garmin Etrex 20x GPS device.
- Performed water infrastructure surveys and estimations for 26 new connections, pipelines, repairs, and borewell projects in the Junagadh Municipal Corporation.

Junagadh, Gujarat

Jul 2021 - Jan 2022

### Nirman Group

Civil Engineer

- Collaborated with architects and engineers to develop and finalize building 30+ plans for residential and commercial projects, ensuring compliance with all building codes and regulations.
- Managed and supervised construction crews of 6+ residential projects, ensuring adherence to project timelines, budgets, and quality standards.

Halol, Gujarat

Feb 2022 -May 2024

## Technical Skills

- **Geospatial Tools:** ArcGIS Pro, QGIS, SNAP, Google Earth Engine, ArcGIS Online, Survey 123
- **Programming:** Python, JavaScript, HTML, CSS, R, SQL
- **Technologies:** Arduino IDE, AI/ML, Microsoft Office Suite
- **Other Skills:** Remote Sensing, Data Visualization, Machine Learning Forecasting, Satellite Image Processing

## Publications

- Research paper on the thesis “Structural vibration control using Tuned Mass Damper” was published in the IJRAR Journal Paper ID (IJRAR2002314). Published Date: 06-06-2020
- Review paper on “Use of nanotechnology in the Paint Industry”. [Published in IJAERD, e-ISSN: 2348-4470] Published Date: 01-02-2019

## Exploratory Projects

- Made a soil moisture detection device with Arduino Uno inspired by the ChaSTE unit in Chandrayan 2.
- Ship detection using SAR data in SNAP.
- Employment Dashboard for visualisation using R(programming language).

## Certification

- Machine Learning Training – Internshala (6 Weeks) - Completed on August 17, 2022
- IELTS - **7.5 bands** (2022)
- ESRI: Make an Impact with Modern Geo Apps (4 weeks)- Completed on October 30, 2024

## Leadership and Activities

- Sports Secretary for 2024-2025 for the Faculty of Technology at CEPT University.
- Electoral Commission for 2025-2026 for the Faculty of Technology at CEPT University.
- Representative of the Gender Parity Mission at CEPT University from FT.
- Vice Chair of IEEE GRSS CEPT University student chapter.
- Leader of The GIS Club with 137 members at CEPT University.
- Student Coordinator for Public Relations, Coordination, and Communication for the GTU Innovation Council.
- Presented research paper entitled “Nanotechnology in Paint Industry” at National conference and workshop on Application of Nanotechnology in Civil engineering-2019.