

# Soumya Mahata

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## Education

**Indian Institute of Technology (Indian School of Mines), Dhanbad**

M.Sc. Tech in Applied Geophysics (CGPA: 7.76 / 10.00)

Expected May 2027

Dhanbad, Jharkhand

**Ramakrishna Mission Vivekananda Centenary College, Rahara**

B.Sc. (Honours) in Physics (CGPA: 7.41 / 10.00)

June 2024

Rahara, West Bengal

**Ramakrishna Mission Vidyapith, Purulia**

Secondary (WBBSE, 2019): 90.00% — Higher Secondary (WBCHSE, 2021): 86.60%

2013 – 2021

Purulia, West Bengal

## Experience

**Geophysical Lab Training Visit**

5th – 16th May, 2025

CSIR-National Geophysical Research Institute (NGRI), Hyderabad

- Gained practical exposure to seismology, MT, gravity, magnetics, GPS, and geochemistry through lab tours and expert-led sessions.
- Learned seismic data acquisition workflows, and developed basic skills in data processing and interpretation.

**Seismic Modeling and Migration using SeisRTM**

8th – 10th February, 2025

Participated in a 3-day workshop at IIT (ISM), Dhanbad

- Gained hands-on experience with reverse time migration (RTM) techniques and seismic data processing using SeisRTM software.

**Winter Geological Field Training**

December, 2024

On-Site Field Training — Dhanbad, Jharia, Basudevpur and Gomoh Areas

- Conducted geological fieldwork involving structural measurements, rock identification, and mapping across varied terrains, alongside analyzing the structural and environmental impacts of coal mining.

## Technical Skills

**Programming & Markup Languages:** HTML,  $\LaTeX$ , Python, SQL (Beginner)

**Tools & Libraries:** MS Office (Word, Excel, PowerPoint); NumPy, Pandas, Matplotlib, Seaborn, scikit-learn, TensorFlow

**Machine Learning:** Basic understanding of machine learning workflows

## Area of Interests

- Seismic data processing, interpretation, and advanced imaging for subsurface modeling
- Machine learning applications in seismic analysis for CCS, gas hydrates, and subsurface hydrogen storage

## Achievements

- Cleared IIT JAM 2024 (organized by IIT Madras) with All India Rank 995
- Scored 140 out of 300 in CUET PG 2024

## Social Engagements

**Subject Matter Expert:** Freelancer at LearnAsYouGo.

**Content Writer:** Association of Exploration Geophysicists (AEG) - Student Chapter, IIT (ISM) Dhanbad.

**Volunteer:** Nara Narayan Seva - an annual event that embodies Sri Ramakrishna's ideal of "serving God in man".

**Sports-Engagements:** Football, Swimming, Chess, Cricket.