Soumya Mahata

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Education

Indian Institute of Technology (Indian School of Mines), Dhanbad	Expected May 2027
Master of Science and Technology in Applied Geophysics (CGPA: 7.76 / 10.00)	*Dhanbad, Jharkhand*
Ramakrishna Mission Vivekananda Centenary College, Rahara	June 2024
Bachelor of Science in Physics (CGPA: 7.41 / 10.00)	*Rahara, West bengal*
Ramakrishna Mission Vidyapith, Purulia	July 2021
12th Board (WBCHSE) (Percentage: 86.60 %)	*Purulia, West Bengal*
Ramakrishna Mission Vidyapith, Purulia	May 2019
10th Board (WBBSE) (Percentage: 90.00 %)	*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: Python, SQL (Beginner), LaTeX, HTML
Tools & Libraries: NumPy, Pandas, Matplotlib, Seaborn, scikit-learn, TensorFlow, MS Office (Word, Excel, PowerPoint)
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.