

HIMANSHU GUPTA

DOB: 24 Jan 2003 kona bazar, Howrah, West Bengal

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Education

National Institute of Technology, Rourkela

Bachelor of Technology in Metallurgical and Materials Engineering (CGPA - 6.83)

August 2023 – Present

Rourkela, Odisha

jaggu lal mehta school, Gaya

BSBE, Science (PCM) (Percentage - 69%)

May 2021

Gaya, Bihar

R.k. Academic Point, Salkia

WBBSE (Percentage - 55.6%)

May 2019

Salkia, West Bengal

Relevant Coursework

- Deep Learning
- ML
- Computer Vision

Projects

Laser Welding Defect Analysis and Monitoring

June 2025

- Studied typical weld defects such as porosity, hot cracking, lack of fusion, keyhole instability, and undercut in laser welding processes.
- Applied non-destructive testing (NDT) techniques (X-ray radiography, ultrasonic testing, acoustic emission, optical coherence tomography) for defect detection and evaluation.
- Used high-speed imaging and thermal cameras to monitor molten pool dynamics, spatter formation, and solidification behavior in real time.
- Conducted microstructural characterization of weld zones using SEM/EDS and metallography to correlate defects with process parameters.
- Analyzed the influence of process parameters (laser power, welding speed, shielding gas, focal position) on defect formation.

Technical Skills

- **Languages:** Python
- **Operating Systems:** Windows
- **Developer Tools:** VS Code
- **Technologies/Frameworks:** Velo V8, TensorFlow, PyTorch

Extracurricular Activities

Innovision24

Core Management Member

September 2024

NIT Rourkela

- Organized guest lectures and managed backstage coordination during Hiten Lulla event.

Vriddhi25

PR Team

January 2025

NIT Rourkela

- Handled social media promotion and student outreach.

Edge25– Steellun Event

Event Planning and Logistics

April 2025

NIT Rourkela

- Managed logistical tasks and coordination for Steellun events.