# **Amul Kumar**

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# IIT Varanasi (BHU)

Expected May 2026

Dual Degree Mining Engineering (B.Tech + M.Tech) (CPI: 8.29)

Varanasi.UP

• Relevant Coursework: Basic Geology, Surveying, Rock Mechanics, Fundamentals of rock Mechanics instrumentation, Ground Control, Ug Metal Mine, Ug Coal Mine, Surface Mining

## Experience

## summer internship at HCL (underground mining) (khetri copper mines)

Jun 2024 - july 2024

singhana, rajasthan

Mining Engineer

- Geology: Basic understanding of the work of a geologist, including identification of ore lenses, quality control processes, and knowledge of ore types such as CuFeS2 (chalcopyrite)
- Surveying: Experience with main level and sub-level plans, ventilation plans, water pump plans, ore dumping plans, and development plans.
- Blasting: Learned about explosives, secondary explosion methods, and observed the process of charging and blasting a raise.
- Drilling: Knowledge of burn cut and ring drilling patterns, usage of Simba and ITH (drifter)for drilling, development, and roof bolting, and exposure to jumbo drilling
- Mucking and Material Handling: Experience with LPDT and LHD for mucking operations, understanding of ore and waste dumping points, material handling process including orebin, surgebin, feeder, crusher, disc screen, and surface material handling.

#### **Projects**

Real-Time Strata Monitoring Using Graphs | React.js, Express.js, Mongo Db, Recharts, Node.js

- Developed a data visualization dashboard using Recharts to visualize strata monitoring data.
- Visualized data in graph form for ongoing projects, providing real-time insights to improve decision-making processes. Users can search data by instrument ID and date, and set safe limits on the graph to monitor compliance and safety. Potential for extension to real-time monitoring using API data.

#### Technical Skills

Languages: c/c++, javascript, python, TypeScript, html,css

Technologies: React.js, , Express.js, Node.js, MongoDb,tailwindcss,Bootstrap,Tailwind

mining software (currently exploring): autocad 2d and 3d, geovia surpac

#### Achievements

- Led a team of four members in the prestigious Hult Prize competition.
- Achieved a top 10 finish at IIT BHU, showcasing innovative solutions and strong team collaboration.

## Social Engagements

spardha-fest: Led a team of second-year students to ensure seamless and secure entry for all attendees at Sparadha Fest.

Club Member: core team member in business club in tech team

Sports-Engagements: Deadlift, chess, football.

