

ATUL KUMAR

Education

Birla Institute of Technology, Mesra

Bachelor of Technology in Chemical Engineering

2023 – Present

Ranchi, India

Chinmaya Vidyalaya, Bokaro Steel City

Higher Secondary: Class: 11,12

2021 – 2022

Bokaro, Jharkhand

Relevant Coursework

- Statistics & Probability
- Predictive Analytics

- AI Automation
- Database Management

- Machine Learning
- Business Intelligence

- EDA
- Data Structures

Projects

Market Regime Detection using Time Series Clustering

Jan 2026

Python, Pandas, NumPy, Scikit-learn, Time Series Analysis

- Analyzed weekly NIFTY 50 data from 2018–2025 using rolling 5-week returns and volatility.
- Applied unsupervised clustering to classify market regimes into bull, bear, and sideways states based on return–volatility patterns.
- Identified bull regimes with returns between 0.02 and 0.10 and volatility below 0.03, while bear regimes showed drawdowns beyond -25% with volatility spikes up to 0.10.
- Evaluated regime-based strategies, showing momentum buy-and-hold in bull, while limiting losses during bear phases.

Risk-Adjusted Stock Ranking System

Jan 2026

Python, Pandas, NumPy, Financial Analytics, Time Series Analysis

- Analyzed 7 large-cap equities using daily price data from 2022–2025 to evaluate performance across market conditions.
- Computed key risk metrics including annualized volatility (2.42–22.28), Sharpe ratio (20.48–94.72), and maximum drawdown (-30% to -74%).
- Identified AAPL as the strongest risk-adjusted performer (Sharpe 94.72) while flagging high-risk stocks such as NVDA (volatility 22.28).

Credit Card Financial Report

Aug 2025

Power BI, MySQL

- Designed an interactive Power BI dashboard with MySQL-based ETL pipelines for analyzing \$55M+ transactions.
- Delivered actionable insights into customer segmentation and revenue growth through analytics-driven visualization.
- Tracked key KPIs including customer score (3.19) and total interest revenue (\$7.84M).

Technical Skills

Programming: C, C++, Python

Database & Tools: MySQL, DBMS, Power BI, MS Excel, Tableau

Data Analytics: Data Analysis, Data Modeling, Data Visualization, EDA

Cloud & Automation: AWS, Google Cloud, Automation Bots

Web Development: HTML, CSS, JavaScript, WordPress, Website Hosting

Machine Learning: Regression, Classification, Clustering, Scikit-Learn, PyTorch

Certifications & Job Simulations

The Data Analyst Course: Complete Data Analyst Bootcamp – Udemy

Deloitte Australia Data Analytics Job Simulation – Forage

Position of Responsibility

College Cultural Fest—Bitotsav

Mar 2025

Member

- Handled a team of 15 volunteers to organize a college cultural fest attended by 300+ participants, ensuring smooth execution and timely completion of all events.

Executive Member – IICChE Club, BIT Mesra

Mar 2025 – Present

Technical Activities

- Collaborated in technical and data workshops focused on process optimization and visualization.
- Increased event participation by 25% through data-driven digital promotion for COALESENCE'25.