

# ATUL KUMAR

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## Education

**Birla Institute of Technology, Mesra**

**2023 – Present**

*Bachelor of Technology in Chemical Engineering*

*Ranchi, India*

**Chinmaya Vidyalaya, Bokaro Steel City**

**2021 – 2022**

*Higher Secondary: Class: 11,12*

*Bokaro, Jharkhand*

## Relevant Coursework

- Statistics & Probability
- AI Automation
- Machine Learning
- EDA
- Predictive Analytics
- Database Management
- Business Intelligence
- 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 – IChE 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.