# Sourav Sharma

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Portfolio Website

# **Education**

Indian Institute of Science Education and Research Bhopal, BS in Engineering Science

Aug 2024 - July 2028

- CPI: 7.05/10
- Coursework: Data Structure, Algorithm, Numerical Methods, Optimization Techniques, Discrete Maths, Linear Algebra, Calculus

# **Experience**

ML Intern, GeoAI4Cities Lab, IISER Bhopal

Dec 2024 - Jan 2025

- Worked on Point Cloud Annotation and developed a ML model for Point Cloud Segmentation.
- Utilized CloudCompare and Python scripts for 3D data processing and analysis.

# **Projects**

#### **Trading Engine Server**

2025 | Project Link

- Developed a modular trading engine server in C# (.NET Core) with real-time order processing, asynchronous services, and robust logging.
- Applied object-oriented design, dependency injection, and configuration management to ensure code maintainability and scalability.

EquityMetrics 2025 | Project Link

- Built a Python-based portfolio analyzer computing alpha/beta, volatility, and risk-adjusted returns, with interactive visualization of drawdowns and rolling metrics.
- Tools Used: Python, Yfinance

#### **Stock Regression Modeling**

2025 | Project Link

- Developed OLS, Lasso, Ridge, and Elastic Net regression models to predict stock returns.
- Evaluated model performance using RSE, MSE, and RMSE metrics, achieving least RMSE of 4.1656 on OLS.

#### Stock Price prediction using ML

2025 | Project Link

- Developed and optimized ML models (Random Forest, KNN) to forecast Bank of America's stock prices using historical data and macroeconomic indicators, achieving 92% accuracy (R<sup>2</sup>).
- Engineered features, optimized hyperparameters, and evaluated performance using RMSE, MAE

# **Technologies**

**Languages:** C++, C, C#, Python

Libraries: Pandas, NumPy, Matplotlib, Searborn, Plotly

Technologies: Git & Github, Google Colab, Excel, Jupyter, VS Code, Sublime Text

# Ratings & Academic Achievements

- Newbie on Codeforces, Max Rating: 977, Username: Sneaky_Typer	Codeforces   <b>Profile Link</b>
- 1 star on CodeChef, Max Rating: 1172, Username: scorzion	CodeChef   <b>Profile Link</b>
- Grey on AtCoder, Max Rating: 64, Username: scorzion	AtCoder   <b>Profile Link</b>

# **Key Courses Taken**

- <b>Options 101</b> by Akuna Capital University	2025
- Summer of Quant by Quant Club   JIT KGP	2025

# **Postions of Responsibility**

- AI & ML Tech Lead, Google Developer Group on Campus, IISER Bhopal

- **Student Volunteer**, Placement Cell, IISER Bhopal Mar 2025 - Present

Oct 2024 - Present Mar 2025 - Present