



CRITICAL MINERAL FORECASTING PLATFORM

Comprehensive Analysis Report for Import-Export Trade Forecasting

Copper, Lithium, and Graphite

Plutus Hackathon 2025

Presented by: Team PLEO

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LIVE DASHBOARD ACCESS

Live URL	https://mineral-forecasting-plutus.vercel.app/login
Email	judge@plutus.iitism.ac.in
Password	Plutus2025!

KEY RESULTS

Mineral	Import Dependency	Trade Deficit (FY25)
Copper	89%	USD 6.74 Billion

Lithium	78%	USD 275 Million
Graphite	73%	USD 108 Million

ML MODEL PERFORMANCE

Model	MAE	MAPE	RMSE	R-Squared
ARIMA	12.5	4.2%	18.3	0.89
LSTM	10.8	3.8%	15.6	0.91
Hybrid (RECOMMENDED)	9.2	3.2%	13.4	0.94

RESOURCES FOR JUDGES

Judges Repository	https://github.com/hkj13/mineral-forecasting-judges
Jupyter Notebook	notebooks/mineral_forecasting_models.ipynb
Processed Data	data/processed/*.csv
Full Report	reports/FINAL_SUBMISSION_REPORT_FORMAL.md