Sanuj Singh

4th year, Computer Science Engineering
Bachelors in Technology
Kalinga Institute of Industrial Technology, Bhubaneswar

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Technical Skills

Languages: Python, SQL
Frameworks & Libraries: LangChain, LangGraph, Pandas, NumPy, Scikit-learn, Plotly, Streamlit, XGBoost, Prophet
Developer Tools: Git, VS Code, Jupyter Notebook, Google Colab, Tableau, Excel
Core Competencies: Generative AI, Data Science , Time Series Forecasting, ETL Pipelines, Statistical Analysis
Soft Skills: Problem Solving, Logical Reasoning, Communication, Team Collaboration

Projects

•SwarmTrader - AI Multi-Agent Financial Analyst | LangGraph, Gemini, Python *Dec 2025*

Engineered an autonomous multi-agent system for real-time stock market analysis and investment recommendations.

- Architected a **LangGraph** state machine coordinating 5 specialized AI agents (Ticker Resolver, Financials, News, Market Data, Master Analyst) using **Google Gemini-2.5-Flash** LLM.
- Integrated **yahooquery** and **yfinance** to fetch real-time OHLCV data and news, alongside **Google Search API** for cross-currency financials with automated **data normalization** (e.g., Lakh/Crore to USD).
- Developed a real-time **Streamlit** dashboard featuring dynamic agent state visualization, interactive **Plotly** price history charts, and automated SWOT analysis generation.

•CarDekho Interactive EDA Dashboard | Streamlit, Plotly, Python *Nov 2025*

Built an interactive Business Intelligence dashboard to analyze the CarDekho used car dataset.

- Designed multiple visualization modules (**bar charts, scatter plots, heatmaps**) to analyze seller behavior, price trends, and fuel distribution patterns.
- Implemented summary statistics and KPIs (**average price, mileage, vehicle age**) to provide quick actionable insights.
- Added export functionality and enhanced usability with a tab-based layout and efficient data caching.

•Natural Gas Price Forecasting Project *Nov 2025*

Built a time series forecasting solution to predict monthly natural gas prices for the energy sector.

- Tools & technologies used: Python, **Prophet**, Scikit-learn, Pandas, Matplotlib, Jupyter Notebook.
- Delivered accurate short-term forecasts with trend/seasonality analysis and interactive visualizations for energy planning.

•Advanced House Price Prediction using XGBoost *Oct 2025*

Developed a robust ML pipeline to predict housing prices with high accuracy.

- Tools: Python, Pandas, Scikit-learn, **XGBoost**, Feature Engineering, Hyperparameter Tuning.
- Achieved 88.2% R^2 score and RMSE of 27,383 using a tuned XGBoost regressor with 5 key hyperparameters selected via RandomizedSearchCV.

Certifications

•Google Advanced Data Analytics Certificate *2025*

- Gained hands-on experience with Python, Jupyter Notebook, and Tableau for data analysis and visualization.
- Applied statistical methods, regression analysis, predictive modeling, and experimental design to real-world datasets.
- Completed a capstone case study project, analyzing business data and presenting actionable insights.

Education

•KIIT University *2022 - 2026*
B.Tech Computer Science Engineering; CGPA: 7.47 Bhubaneswar, India

•M.S.Memorial Public School *2021*
CBSE (Class XII); Percentage: 81% Motihari, India

•Zenith Child School *2019*
CBSE (Class X); Percentage: 75% Arunachal Pradesh, India