

ANANT SHARMA

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Projects

Gemstone Price Prediction (Apr 2025)

[GitHub Link](#)

End-to-end **regression** project on a gemstone **price** dataset. Built a **modular scikit-learn** pipeline covering:

- **Data Ingestion & Transformation:** handled missing values with *SimpleImputer*, applied *StandardScaler* to continuous features and *OrdinalEncoder* to categorical cuts/colors/clarities; improved **data completeness** by **12%**.
- **Modeling:** compared **Linear Regression**, **Random Forest**, and **XGBoost** under a **bias-variance trade-off** framework; achieved a best R^2 of **0.87** (up from **0.75** baseline), and reduced **RMSE** by **18%** via **GridSearchCV**-tuned hyperparameters.
- **Evaluation:** assessed performance with **RMSE** and R^2 ; performed **residual analysis**, identifying and correcting **heteroscedasticity** issues to boost **predictive stability** by **10%**.
- **Deployment:** serialized the best model and preprocessing pipeline; built a **Flask** web UI enabling **real-time** predictions with **95% uptime**.

Car Price Prediction (Cars Dataset) (Mar 2025)

[GitHub Link](#)

End-to-end **machine learning** project on a cars dataset, including:

- **Exploratory Data Analysis:** visualized **distributions**, handled **outliers**, and examined **feature correlations** using *pandas*, *matplotlib*, and *seaborn*.
- **Feature Engineering:** applied **log-transformations** and **encoding** to improve model fit.
- **Modeling:** trained and compared **Linear Regression**, **SVR**, and **Random Forest** regressors.
- **Hyperparameter Tuning:** used k -fold **cross-validation** with **GridSearchCV** for robust parameter selection.
- **Evaluation:** measured model performance with **RMSE** and R^2 metrics.

Skills

C/C++, Python, Problem Solving, Machine Learning, Soft Skills, Django, Django Rest Framework, SQL, Scikit-Learn, Data Science, Data Structures and Algorithms, Pandas, Matplotlib, Numpy, OOPS, Statistics

EDUCATION

B.Tech in Computer Science, SKIT Jaipur

Dec 2022 – Present

Class XII, Birla School Pilani

Apr 2020 – Mar 2021

Class X, Birla School Pilani

Apr 2018 – Mar 2019

Additional Information

- Languages Known: Hindi (Native Speaker), English (Proficient)
- Certifications: Kaggle-Intro to Machine Learning, Intro to Deep Learning
- Other Interests: Philosophy, Reading Books

Other Links

[LeetCode Profile](#) [GitHub Profile](#) [LinkedIn Profile](#) [Portfolio Site](#)