**Proposal:**

In modern society, understanding the factors that contribute to a successful marriage proposal is important to get the answer ‘yes’ from your partner. This is equally important for both individuals and relationship counselors. A data driven approach can provide more insights than a traditional wisdom offers because it provides more concrete insights of various factors that influence proposal outcomes.

In this final project, we work on a dataset containing information about marriage proposals, including demographic factors, relationship quality metrics, and practical considerations. By analyzing various elements, we can better understand the prospects of factors that contribute to proposal acceptance or rejection. This helps individuals to take a better decision about circumstances of their proposals.

We have a dataset with 10,000 observations and 9 columns such as height, age, income, romantic gesture scores, compatibility scores, communication scores, and physical distance between partners (in km). Through exploratory data analysis (EDA) and predictive modeling, we aim to uncover patterns and relationships that influence proposal outcomes.

**SMART Questions:**

1. Are romantic gesture scores more influential in certain age categories compared to others?

2. What combination of factors shows the strongest prediction power for proposal success?

3. Which machine learning algorithms (Logistic Regression, Random Forest, or XGBoost) perform best in predicting proposal acceptance?

**Dataset link:**

https://www.kaggle.com/datasets/anyasorc/marriage-proposal

**GitHub Repository:**

https://github.com/Harshith-Maddala/The\_Extrapolats.git