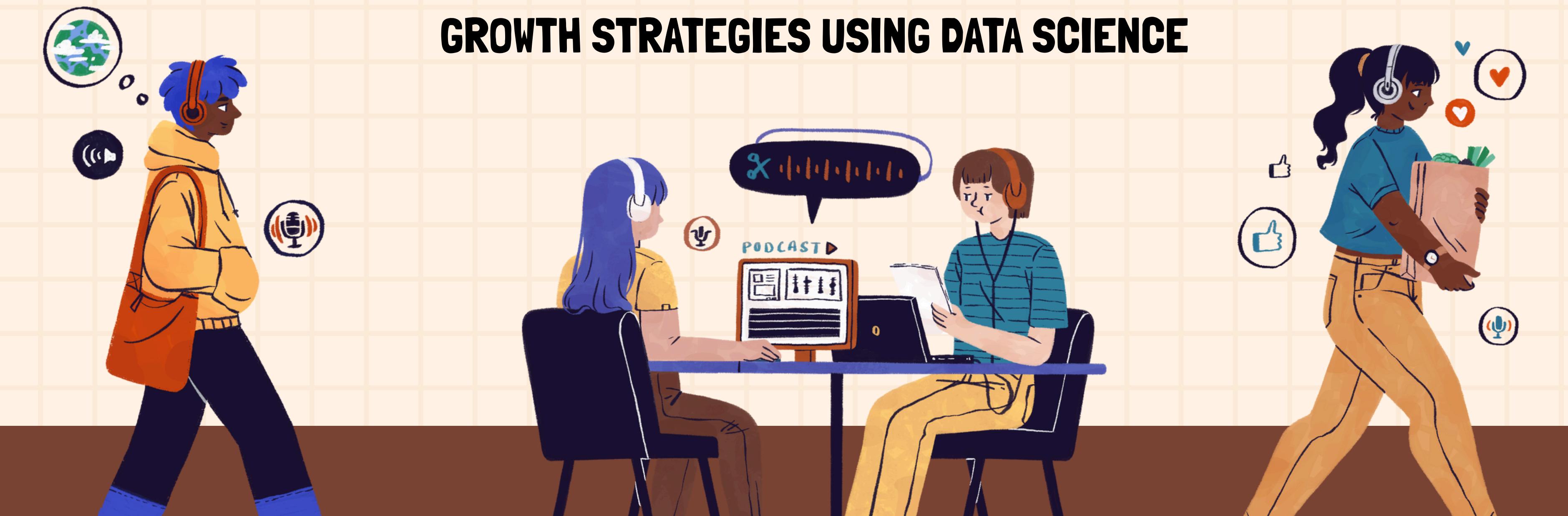




YOUTUBE DATA ANALYSIS & INSIGHTS PROJECT

UNCOVERING TRENDS, AUDIENCE INSIGHTS, AND GROWTH STRATEGIES USING DATA SCIENCE



Project Objective & Motivation

🎯 Objective:

- Analyze YouTube channel & video data to help creators & marketers make informed decisions
- Understand audience behavior, predict growth, and analyze competitors

💡 Why it matters:

- Data-driven decisions → Better content strategy
- Understand competition & audience sentiment
- Predict future performance of channels



Data Analysis & Visualization Process

Data Exploration

- Cleaning & preparing data
- Visualized key trends using Matplotlib & Seaborn

Correlation Matrix Heatmap

- Explored relationships between metrics like views, likes, comments, and subscribers
- Identified strongest predictors of channel success



Modeling Approaches

Regression Models:

- Linear Regression → Predict subscribers count
- Ridge, Lasso, ElasticNet → Handled complex relationships

Classification Models:

- Decision Trees & Random Forests → Classify channels as Successful / Not
- Logistic Regression → Predict channel type (Individual vs Brand)

Sentiment Analysis:

- Analyzed sentiment in video titles to understand audience appeal trends



Results & Impact



Insights Gained:

- Strong correlation between views, likes, and subscriber growth
- Classification models accurately predicted successful channels
- Sentiment analysis revealed popular title trends

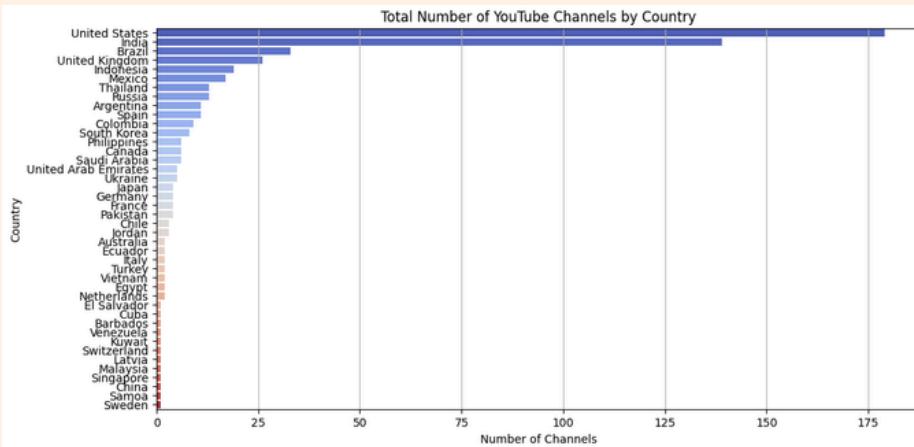
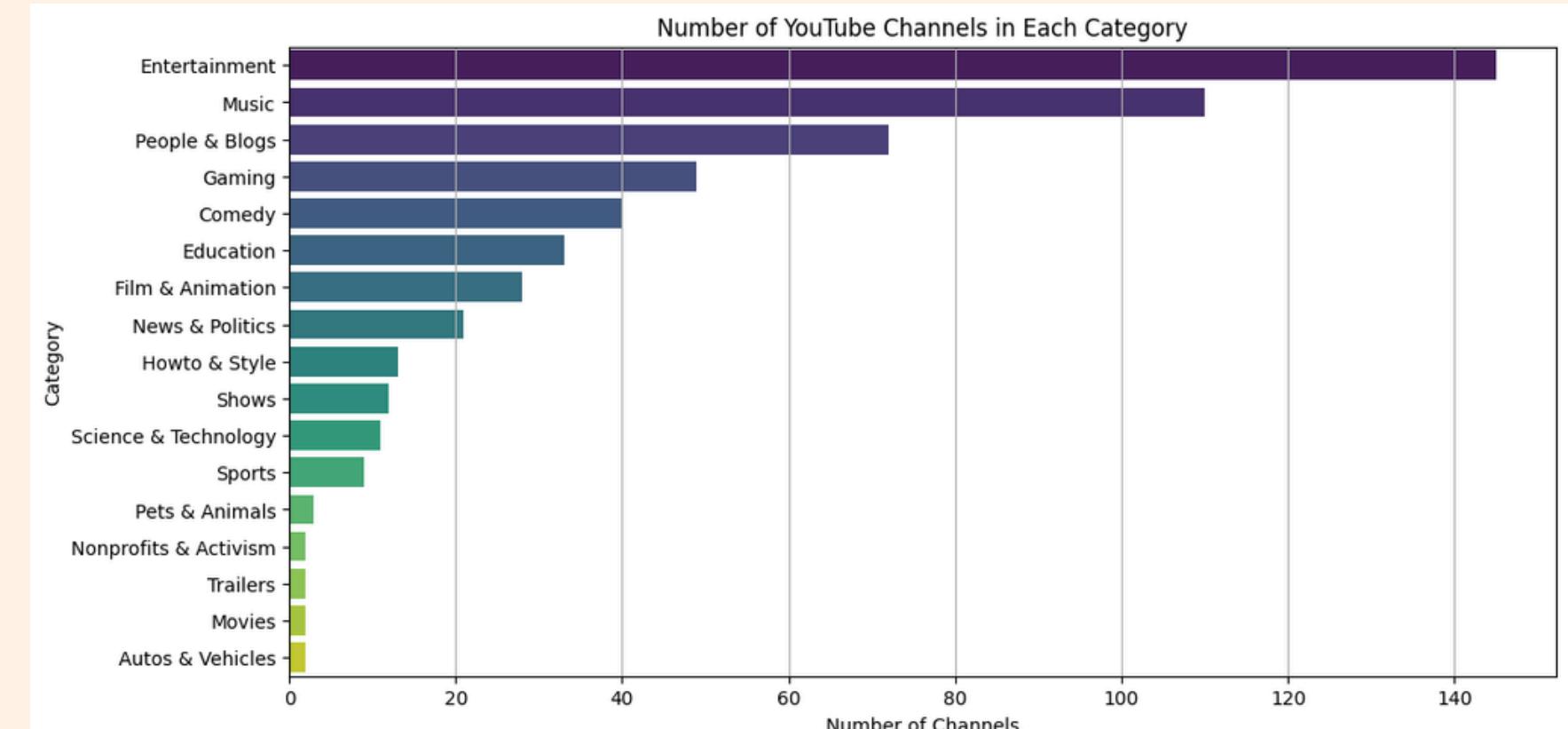
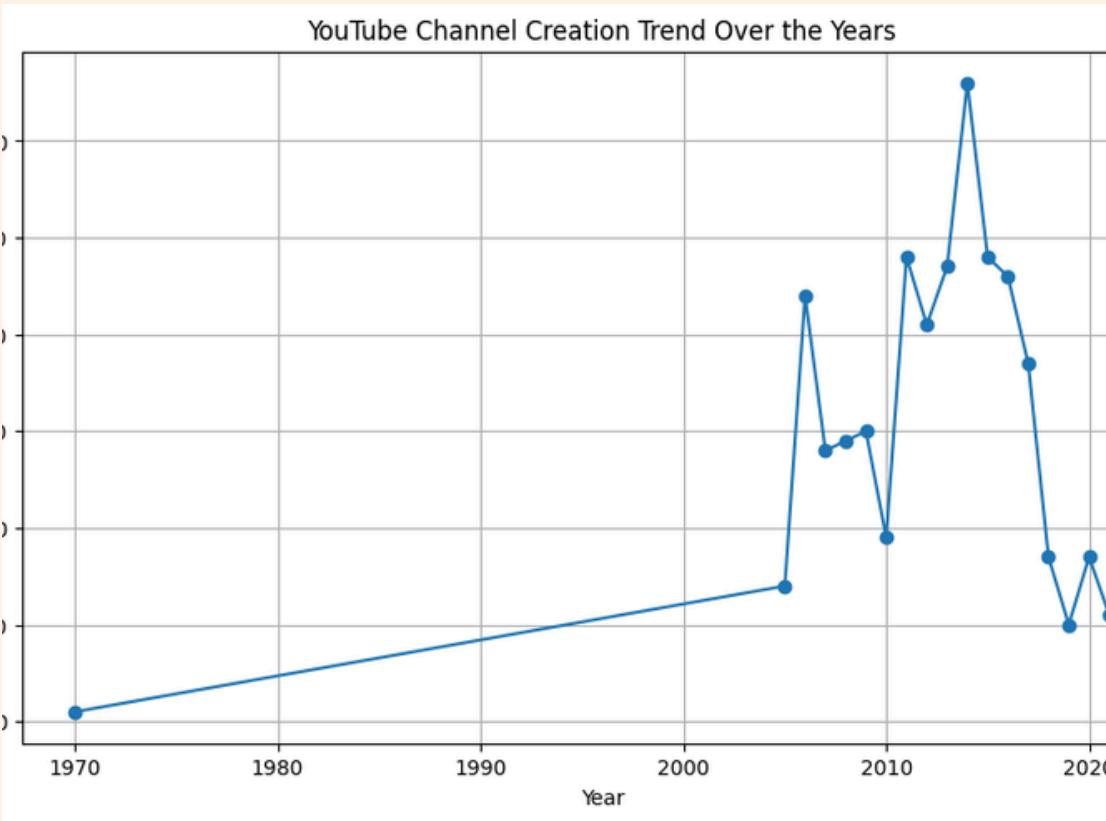
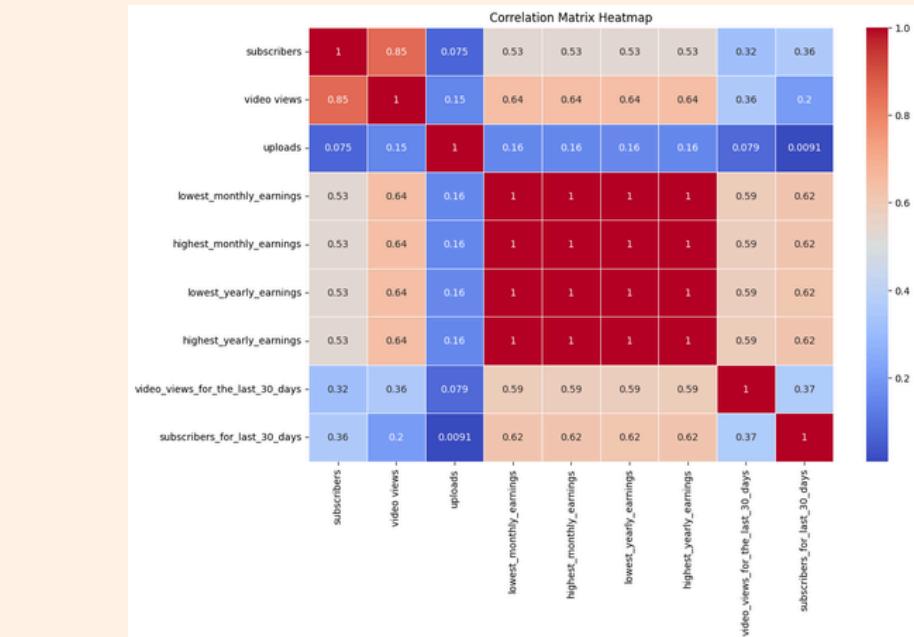
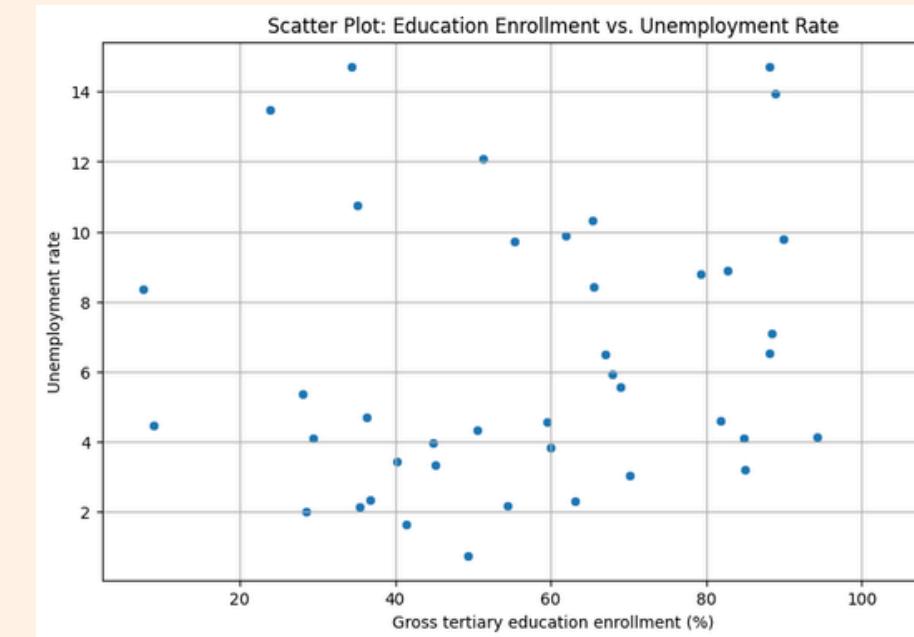
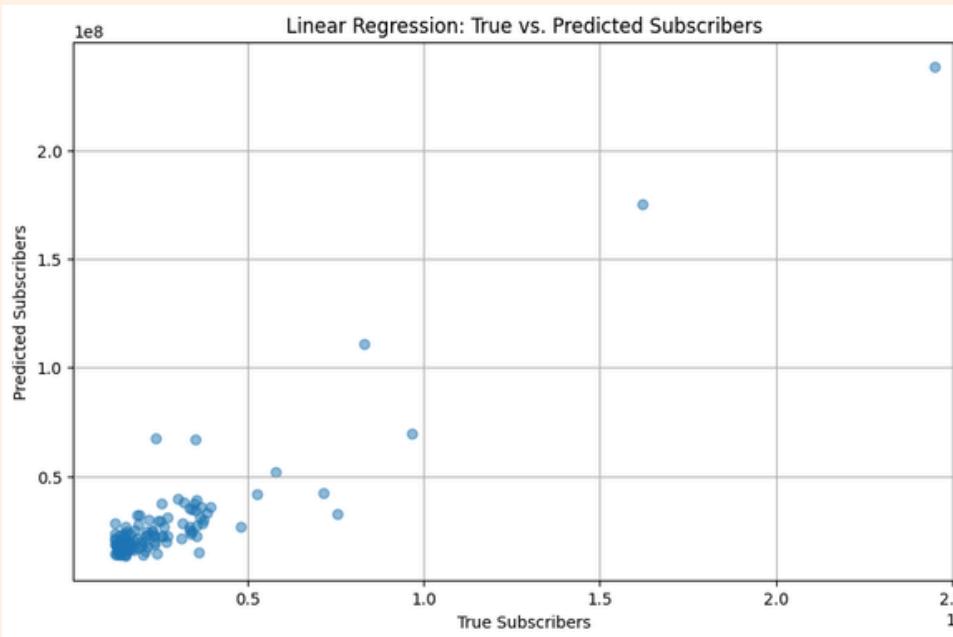


Benefits:

- Data-driven content optimization
- Competitor analysis for strategic growth
- Audience sentiment guidance



New Insights



https://github.com/vedant-dehaley/Youtube_analysisading