Freelancing Trends

Rose Mady, Layan Alfawzan, Aljawharah Alwabel, Arwa Almutairi

Supervised by: Dr. Reem Algifary

Introduction

Freelancing has become a popular career path due to its flexibility and the opportunities it provides across various fields. However, several questions arise regarding its sustainability, income stability, and the demographics of those engaging in this type of work. Understanding freelancing trends can help clarify whether freelancing is a sustainable career choice, identify income patterns, and determine the demographics of freelancers.

Objectives

1- **Assess the sustainability** of freelancing income.
2- Identify countries with the **highest concentration of skilled freelancers.**
3- Determine the most **in-demand skills** in the freelancing market.
4- Analyze the **average income** of freelancers across different skill sets.
5- Analyze the impact of having **multiple skills** on freelancer earnings **versus specializing in one skill**.

Data Collection

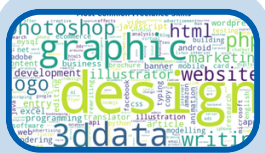**Primary dataset** is sourced through using web scraping method on [freelancer.com] website.

Web scraping is a technique for extracting unstructured data from websites, enabling efficient large-scale data collection.
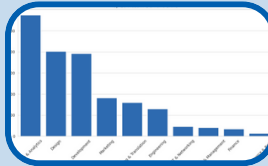
The main tool used for scraping is BeautifulSoup.
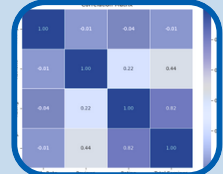
Data Analysis

freelancers are distributed across many countries, with the highest concentration in India (309 freelancers) and Pakistan (160 freelancers).
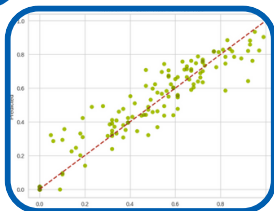

Most Common freelance skills

The chart shows strong demand for Data, Design, Development, and Marketing skills, with other fields like Writing and Finance adding to the market's diversity.
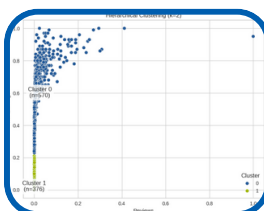

Correlation between all attributes

Models & Findings

We used Linear Regression, Random Forest, and Gradient Boosting to predict average income, evaluating with RMSE, R², and MSE. Random Forest performed best, offering accurate prediction for complex data.

We used K-means and hierarchical clustering to find patterns between earnings and reviews, evaluated with silhouette score. Hierarchical clustering performed best, offering clearer and meaningful groupings.

Conclusion

he analysis reveals that factors such as reviews, ratings, and hourly rates significantly influence freelancers' earnings, with clustering identifying successful profiles. This emphasizes the importance of building a strong reputation and strategic pricing to enhance client acquisition and overall earnings. The study also highlights the role of skill diversification and market positioning in maximizing earning potential. Ultimately, continuous adaptation to evolving market trends ensures sustained success in the competitive freelance landscape