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CS 210 Project Phase II Project Report

Goal of This Project:

The primary objective of this project is to investigate the correlation between the burgeoning technology industry and the prevalence of Python programming language in daily search trends. This analysis aims to determine whether there exists a discernible relationship between the increasing interest in coding, particularly Python, and the escalating revenues of tech companies.

Expected Outcome of This Project:

Based on the hypothesis that the surge in the number of individuals engaging in coding activities may influence company valuations, it is anticipated that a correlation between the search volume of Python and company stock prices, such as Microsoft, will be identified.

Expected Insights of This Project:

Empowering New Programmers:

Novices entering the realm of programming can leverage the insights derived from this analysis to make informed decisions regarding which programming language to embark upon. By considering the trendiness and relevance of Python, aspiring coders can strategically chart their learning journey, aligning themselves with a language that not only resonates with industry demands but also offers ample growth opportunities.

Advantage for Start-ups:

Start-up ventures stand to gain strategic advantages by aligning their coding practices with the prevailing trends identified in this analysis. Should a positive correlation between the popularity of programming languages, particularly Python, and the performance of technology-oriented companies be established, fledgling enterprises can strategically invest their resources in Python-based development efforts. By capitalizing on the language's widespread adoption and the potential synergies with tech industry trends, start-ups can position themselves for accelerated growth and market success.

Data Description:

US Stock Market Data:

I used two data from that these are Microsoft and Gold prices. I choose two different things because we will see is search for programing languages just rising with time or is it correlated with tech companies.

Link: https://www.kaggle.com/datasets/saketk511/2019-2024-us-stock-market-data?resource=download

Programing languages over time:
There are popular languages using today and gives related data and close dates to our main dataset.

Link: https://www.kaggle.com/datasets/nextmillionaire/programming-languages-trend-over-time

Hypothesis Formulation

1 NULL Hypothesis: If there is no correlation between two variables.

2 Alternative Hypothesis: A relationship exists between the popularity of programming languages, particularly Python, and the stock prices of technology-oriented firms such as Microsoft..