

Refining Computer Sales Strategy through Statistical Analysis Project -

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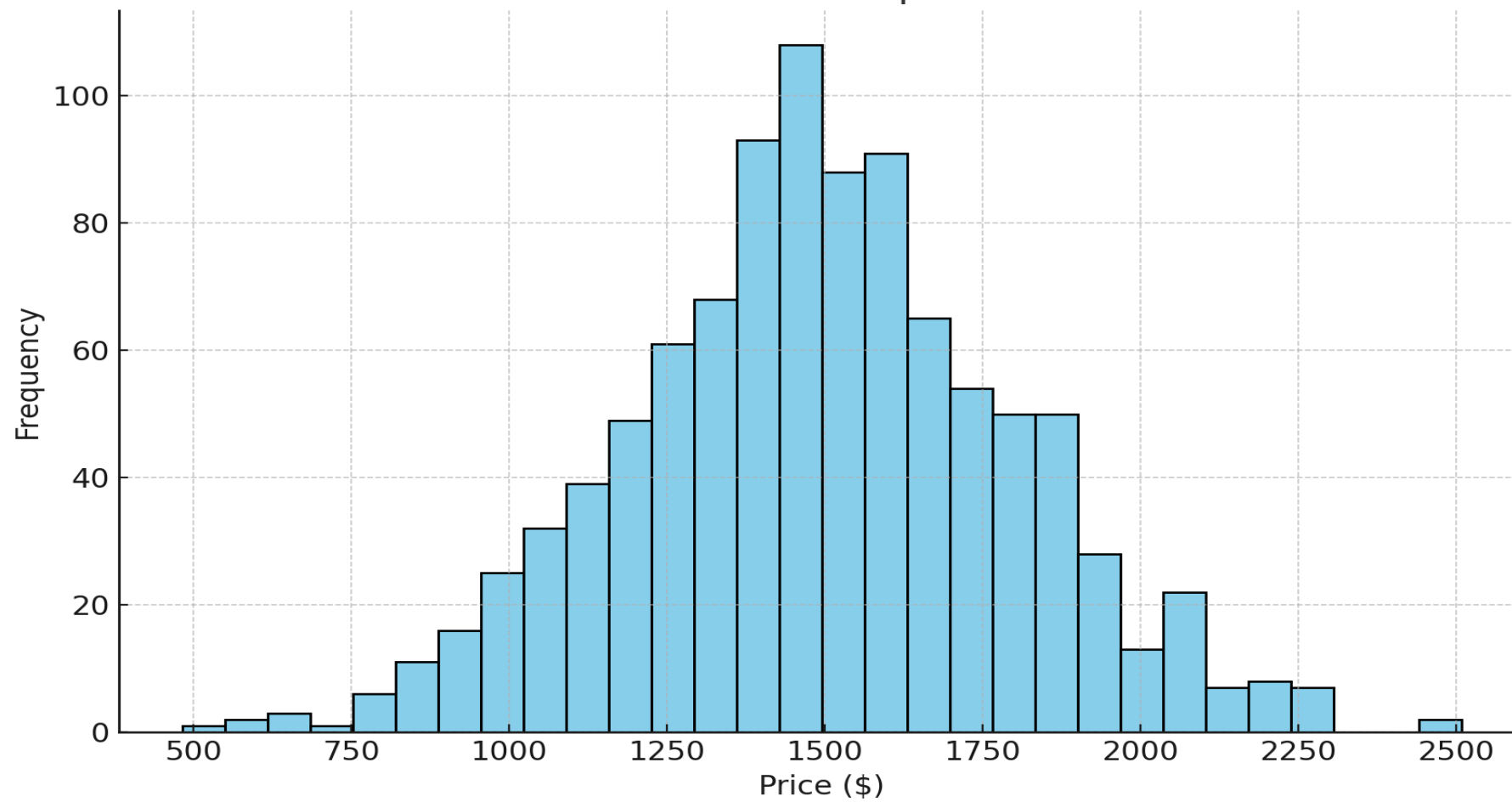
Introduction to Data and Objectives

- This project involves analysing computer configurations and purchase data.
- The main objectives include understanding purchase likelihood, analyzing premium computer features, sampling techniques, and testing hypotheses related to price and features.

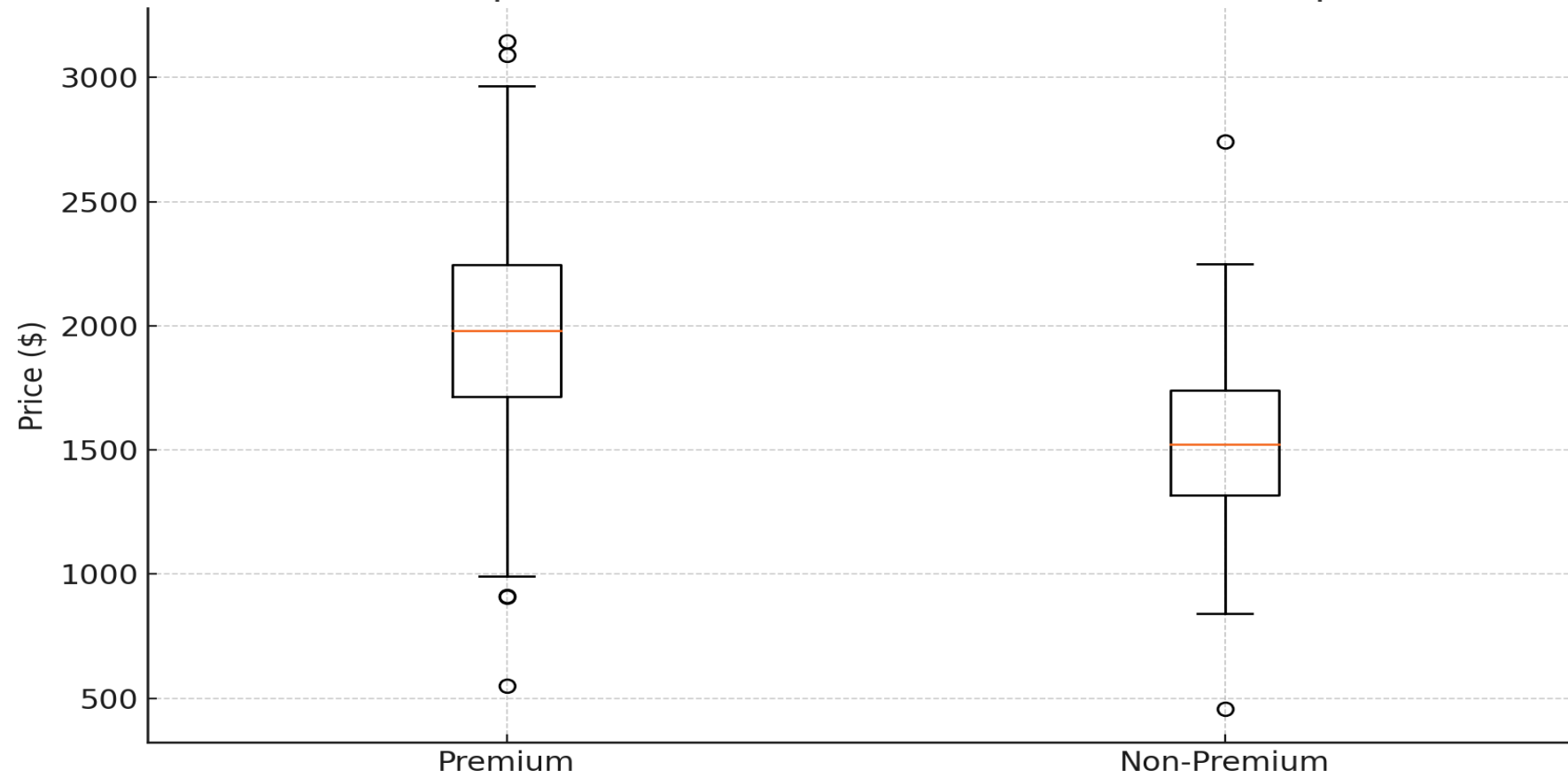
Data Overview

- The dataset contains information on various computer configurations including RAM size, processor speed, screen size, and price.
- We analyse features such as premium classification, CD player availability, and multimedia kits.

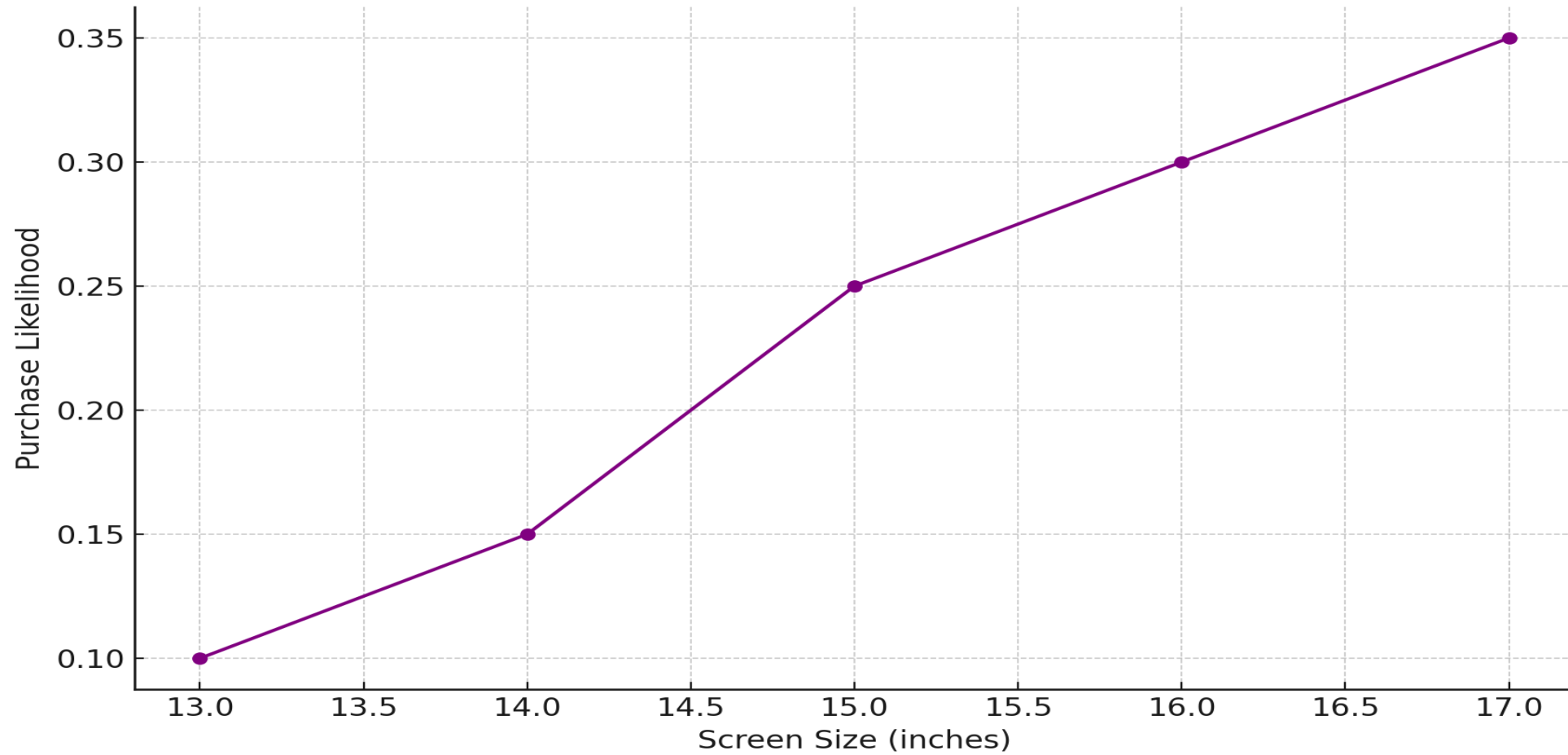
Distribution of Computer Prices



Price Comparison: Premium vs Non-Premium Computers



Screen Size vs Purchase Likelihood



Purchase Likelihood Analysis

- Analysed the likelihood of customers purchasing computers with specific features like 8GB RAM, 14-inch screen, and processor speed over 33 MHz.

Probability of Selling Premium Computers

- Probability of selling a premium computer and the likelihood of specific features, such as having a CD player, were analysed.

Screen Size and Premium Classification

- Probability of premium computers with different screen sizes and the association between non-premium computers and smaller screens were examined.

CD Player and Multimedia Kit Analysis

- Joint probability of having both a CD player and multimedia kit was calculated, along with conditional probabilities.

Simple Random Sampling

- Analysed average price using simple random sampling, giving insights into the overall distribution.

Systematic Sampling

- Systematic sampling was used, and its average price was compared with other techniques.

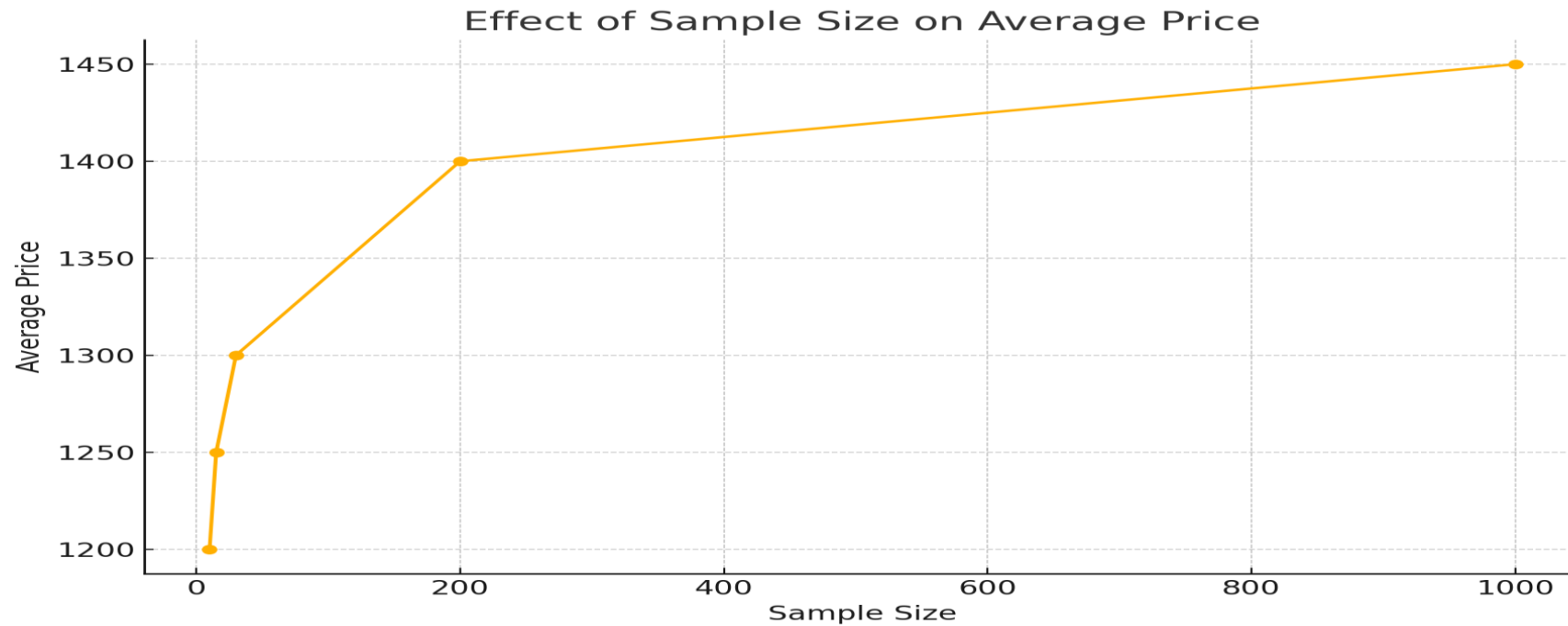
Cluster Sampling

Cluster sampling based on price range was conducted to identify any trends.

Average Price Comparison

- Average prices of premium and non-premium computers were compared using simple random sampling.

Effect of Sample Size on Distribution



Hypothesis Test: Advertising Budget

- Tested whether the mean advertising budget in 2023 was significantly higher than in 2022.

Hypothesis Test: Price of Computers with CD Players

- Investigated if there is a significant difference in average prices of computers with and without CD players.

Price Discrepancy for Premium Computers

- Analyzed if the mean price of premium computers is significantly different from \$2200.

Price Comparison: Premium vs Non-Premium

- Conducted a t-test to determine if the average price of premium computers differs from non-premium.

Summary of Hypothesis Testing

- The results showed no significant differences in some cases, which suggests the marketing assumptions might need reconsideration.



Thank You