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Indipendent Study

**Introduction**

Using Crunchbase data, I leveraged my skills to effectively analyze and present real-life information in a visually compelling manner. The primary emphasis of this project centered on funding amounts and types, allowing for clear and accessible explanations. To achieve this, I utilized the programming language R to construct an interactive analysis report. Rather than opting for a conventional paper format, I envisioned a more visually appealing "application" format to showcase the data. By organizing the content into distinct tabs, each with its own section and focused topic, I ensured seamless navigation and facilitated effortless transitions between subjects.

**Setbacks:**

Initially, my intention was to conduct a predictive study; however, I encountered a challenge as all the required data had already been collected, leaving me with insufficient information for making predictions. Nevertheless, I embarked on the task of creating visualizations to offer insights into potential future trends. During the process, I encountered several challenges, particularly in configuring the application setup and organizing the gathered information effectively. It was crucial to select appropriate graphs and optimize their visual appeal. To ensure the success of this project, I dedicated time to reacquaint myself with R programming and identify the most suitable packages for the task at hand. Through collaborative efforts with my teachers and colleagues, I managed to develop a dynamic and engaging report that not only elucidates the visualizations but also breathes life into them, resulting in an enjoyable and interactive experience.

**1st graph:**

The presented graph illustrates the hypothetical value of investments if the initial stakeholders had retained their shares and other assets within the respective companies. This concept prompts contemplation regarding the potential outcomes that might have materialized. It is plausible that certain investors made premature or delayed sales decisions. The graph, at first glance, may not appear highly informative, hence the inclusion of a dropdown menu. This interactive feature allows users to select any desired organization from the available dataset and observe the specific results pertaining to that particular company. The dropdown menu facilitates easy searching and locating of desired companies, enhancing user convenience.

**2nd graph:**

In a manner reminiscent of the previous graph, this histogram applies a logarithmic transformation to the average funding amounts. This logarithmic compression of the axis results in a non-linear representation. Consequently, the histogram employs width bins to capture the average funding amounts, while the y-axis depicts their corresponding density. The logarithmic transformation, employed to reflect the density, gives rise to a distorted curve, deviating from the previous bimodal distribution characterized by twin peaks.

**3rd graph:**

This graph serves as an introductory overview for the subsequent section, namely, Funding Status. It presents a straightforward bar chart that provides insights into the status of each company, primarily categorized as either having achieved IPO status or not. The labels "public" and "private" are assigned accordingly: "public" denotes companies that have successfully completed the IPO process, while "private" represents those currently in the IPO stage but yet to finalize it. It is noteworthy that the majority of companies fall into the "private" category, as attaining IPO status remains a formidable achievement for any organization. Additionally, there exists a category labeled "delisted," signifying companies that have ceased operations and failed to sustain themselves within the dataset.

**4th graph:**

The initial graph in this section offers an insightful visualization of the relationship between the number of funding rounds and the attainment of a specific funding milestone. The x-axis represents the number of funding rounds, while the y-axis depicts the count of companies that have reached the targeted status. The color variation in the graph corresponds to different funding types. By hovering over the data points, users can gain clearer visibility into specific counts, the precise number of rounds, and the corresponding funding types. It is important to note that this visualization focuses solely on the final funding type for each company. Accordingly, a given company is represented only once in the stacked bar plot, depending on its last funding type and corresponding funding round.

**5th graph:**

While bearing some resemblance to the initial graph, this one features slight variations in its axes. The previous graph on the second tab focused on the overall average funding amount, whereas this graph specifically highlights the last funding amount for each company. The x-axis corresponds to the company names, while the color distinguishes the various last funding types, encompassing multiple categories. Similar to the other graphs, this interactive visualization allows users to hover over data points, revealing specific details pertaining to each company's last average funding amount.