

Project 1

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Introduction

- In our project we wish to analyze how the rise of AI tools like ChatGPT has impacted the education industry and the tech industry as a whole, seeing how companies that embraced it fared versus companies that did not. We intend to delve into various aspects of this transformation, examining the extent to which companies that have adopted AI technologies have fared compared to those that have not embraced these innovations.
- Our primary motivating question for this project is: “What is the impact of AI tools, such as ChatGPT, on the education industry and the tech sector, and how has this adoption influenced the competitive landscape and performance of companies?”

Methods/ Datasets

There are many datasets needed to analyze this topic as a whole. We have datasets across the range from datasets of companies' stocks to datasets for ChatGPT user growth, as well as a student survey on how they feel about AI.

```
# Read data from the CSV file
chatgpt_users <- read.csv("Number of ChatGPT users recorded over past months.csv")
head(chatgpt_users)
```

ChatGPT User Growth

```
##   Sr.No   Date Number.of.ChatGPT.users.recorded.over.past.months
## 1      1 2023-08                                1430000000
## 2      2 2023-07                                1600000000
## 3      3 2023-06                                1600000000
## 4      4 2023-04                                1800000000
## 5      5 2023-03                                1600000000
## 6      6 2023-02                                1000000000
```

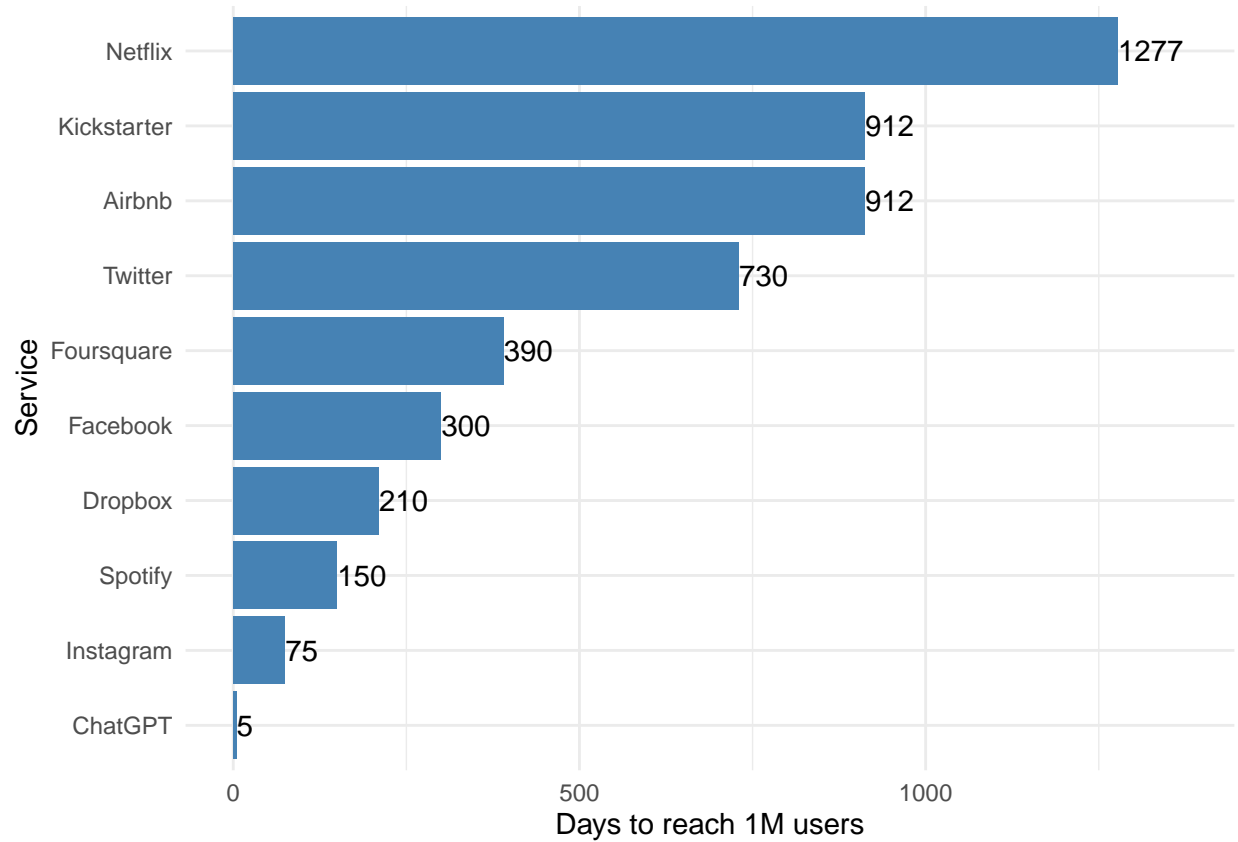
```
chatgpt_users <- chatgpt_users %>%
  rename(TotalVisits = 'Number.of.ChatGPT.users.recorded.over.past.months')
```

```
# Convert the 'Date' column to Date type
chatgpt_users$Date <- as.Date(chatgpt_users$Date, format="%Y-%m")
```

```
# Plotting using ggplot2
# ggplot(chatgpt_users, aes(x=Date, y=TotalVisits)) +
#   geom_line() +
#   geom_point() +
#   labs(title="Number of ChatGPT Users Over Time", x="Date", y="Total Visits") +
#   theme_minimal()
```

ChatGPT User growth VS Chegg stock

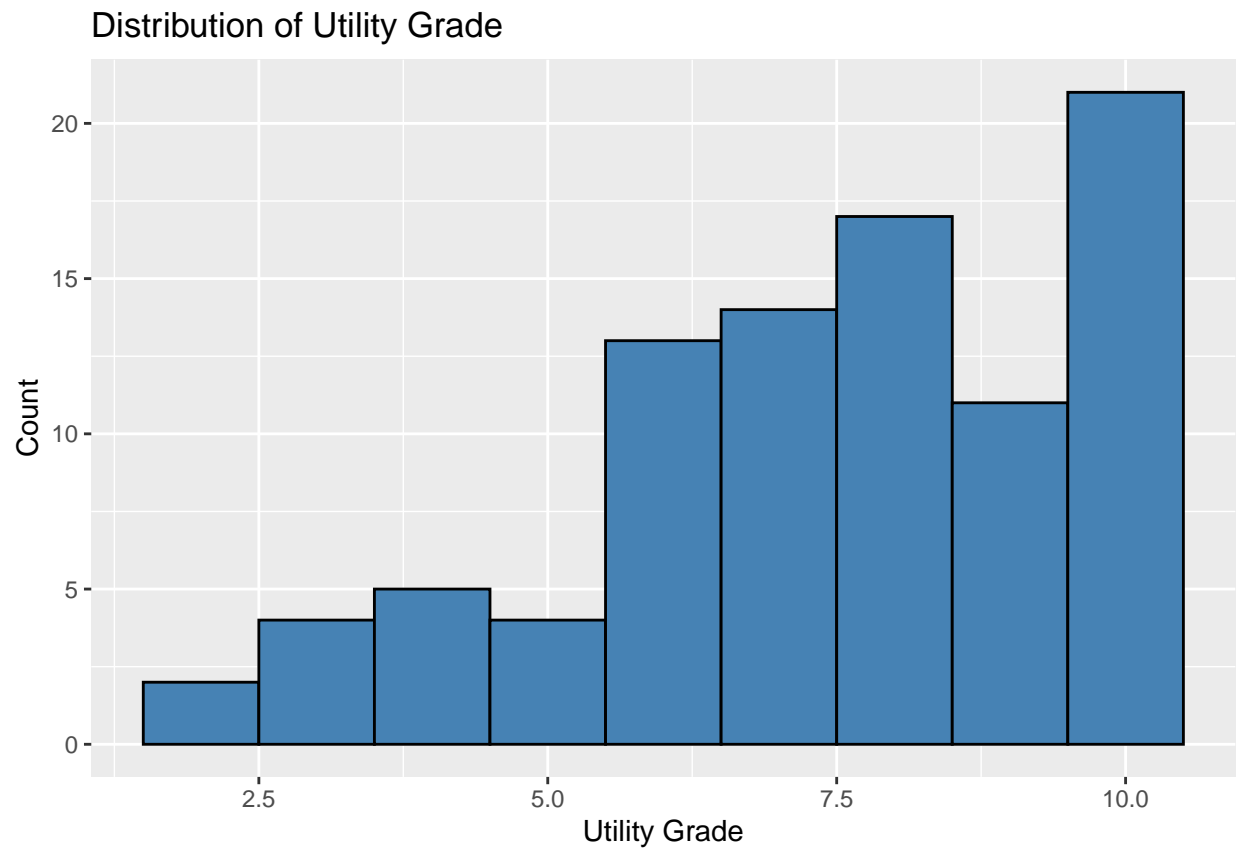
Time taken by services to reach 1 million users Hello



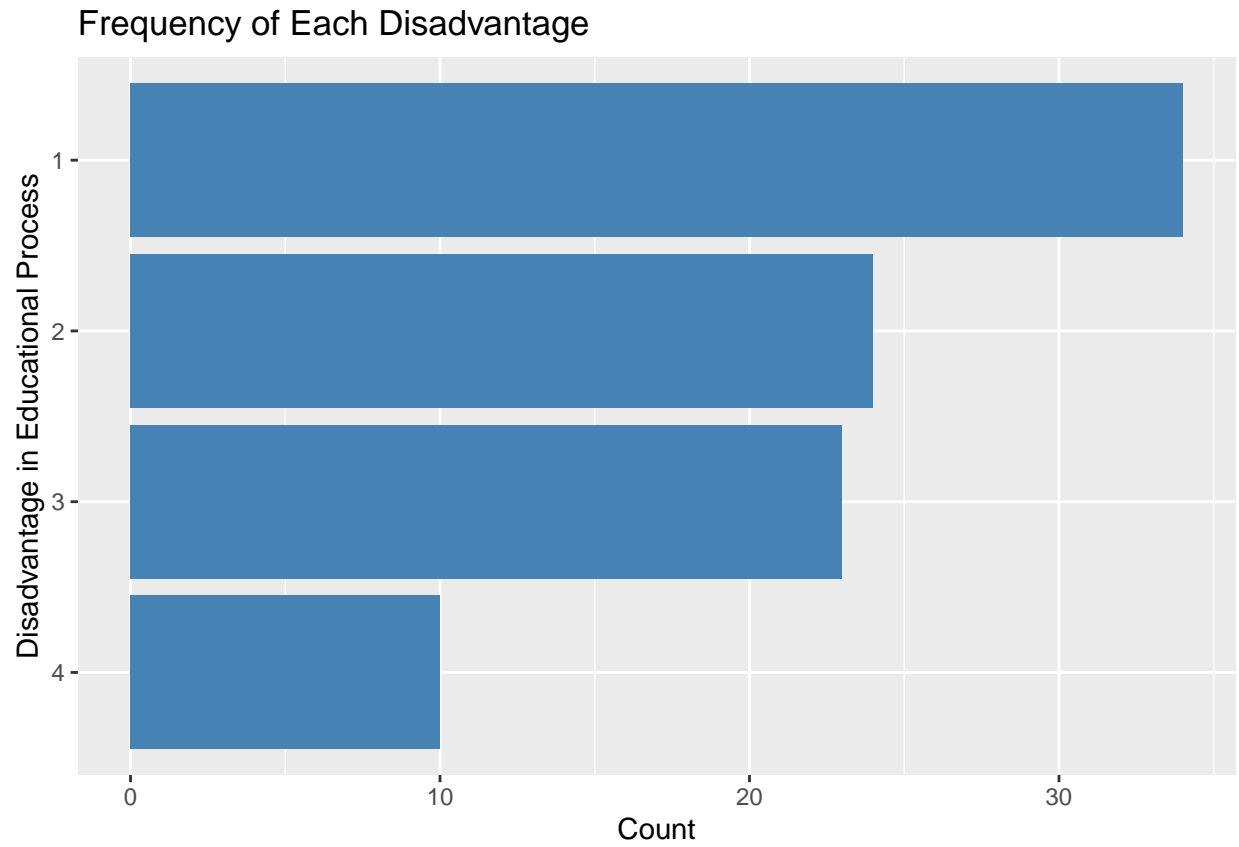
Students' Perspective on AI hello

```
students_survey_ai <- read.csv("Survey_AI.csv")

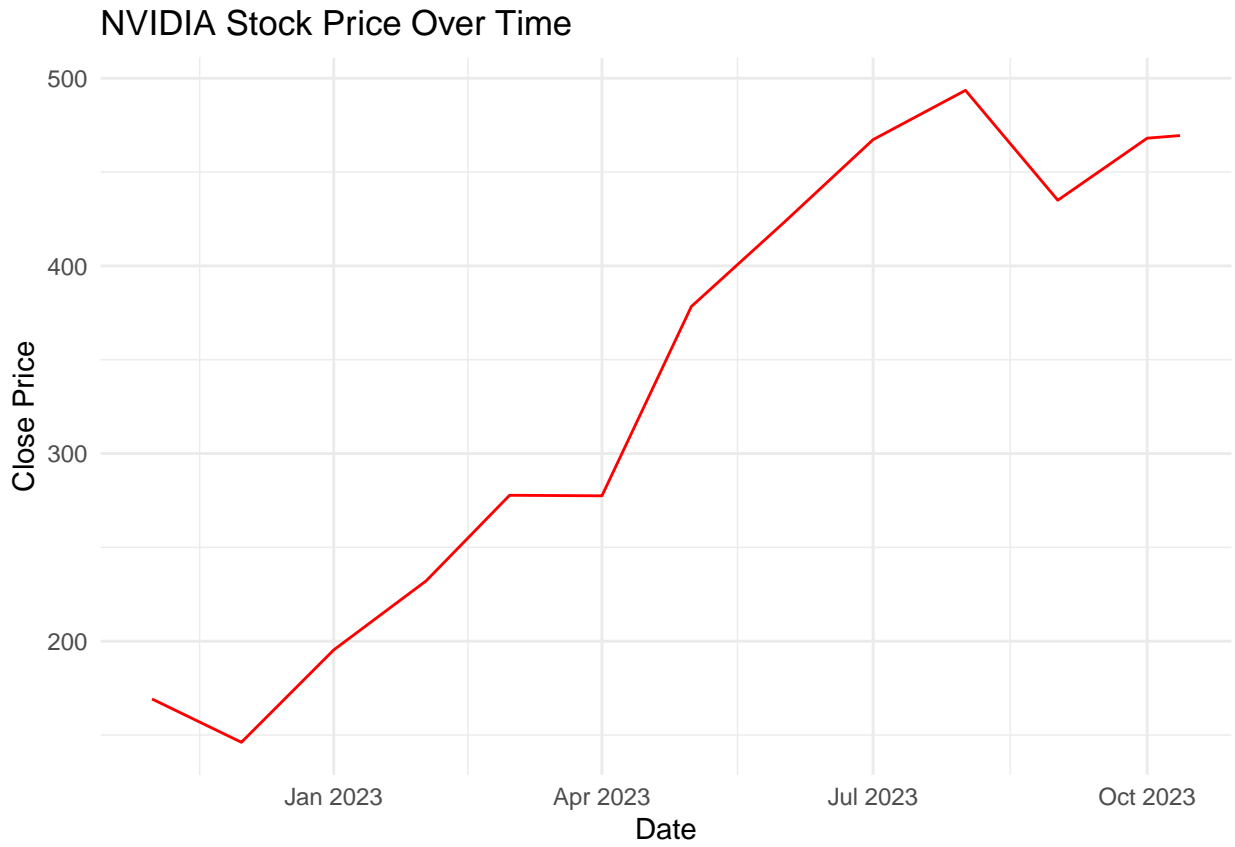
ggplot(students_survey_ai, aes(x = Q7.Utility_grade)) +
  geom_histogram(binwidth = 1, fill = "steelblue", color = "black") +
  labs(x = "Utility Grade", y = "Count", title = "Distribution of Utility Grade")
```

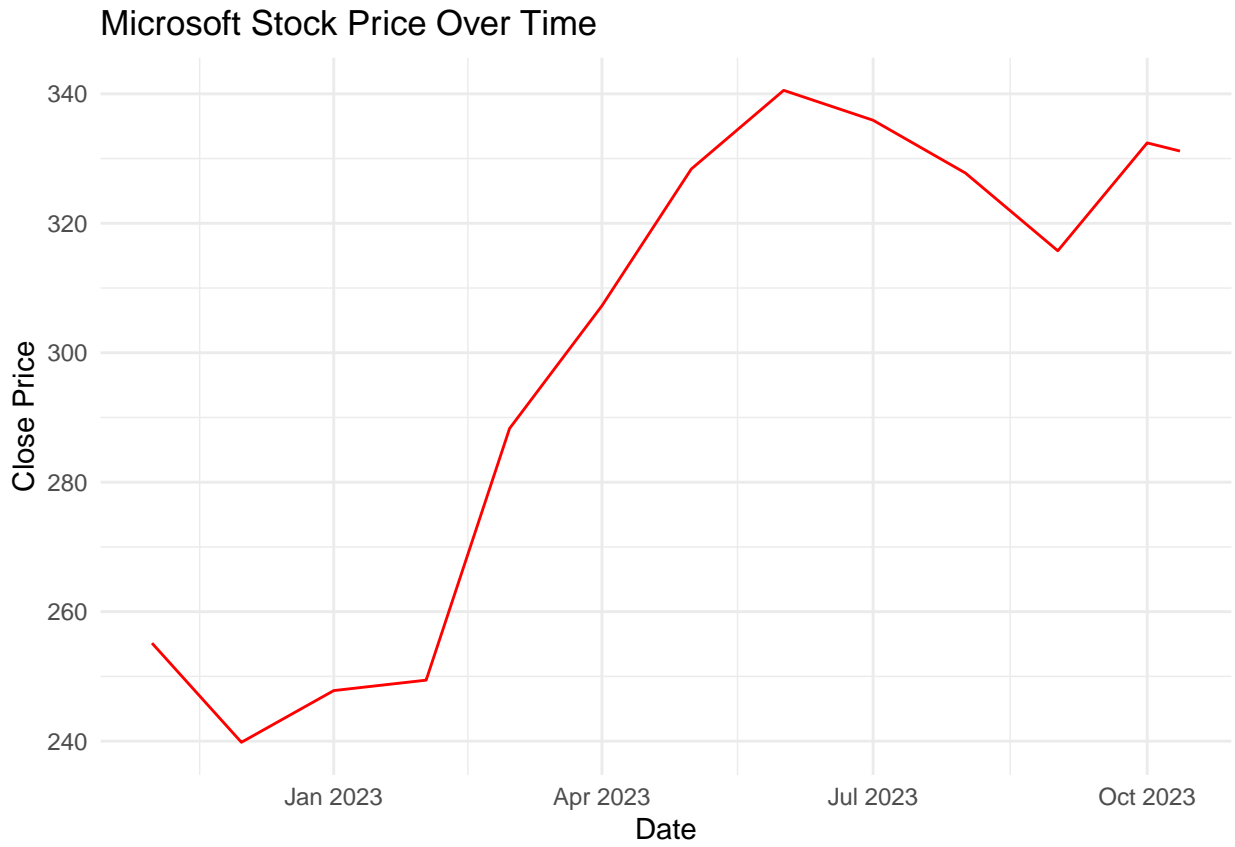


```
# Bar plot for Q11.Disadvantage_educational_process
students_survey_ai %>%
  count(Q11.Disadvantage_educational_process) %>%
  ggplot(aes(x = reorder(Q11.Disadvantage_educational_process, n), y = n)) +
  geom_bar(stat = "identity", fill = "steelblue") +
  labs(x = "Disadvantage in Educational Process", y = "Count", title = "Frequency of Each Disadvantage")
  coord_flip()
```



Stock of Companies That Released Public AI The following are the companies that announced generative AI







Salaries for AI and ML Specialists

ML Model (Companies that integrate AI)

Results

Conclusions

Appendix