Applied Data Science 1 (7PAM2000-0901-2023)

Assignment # 1

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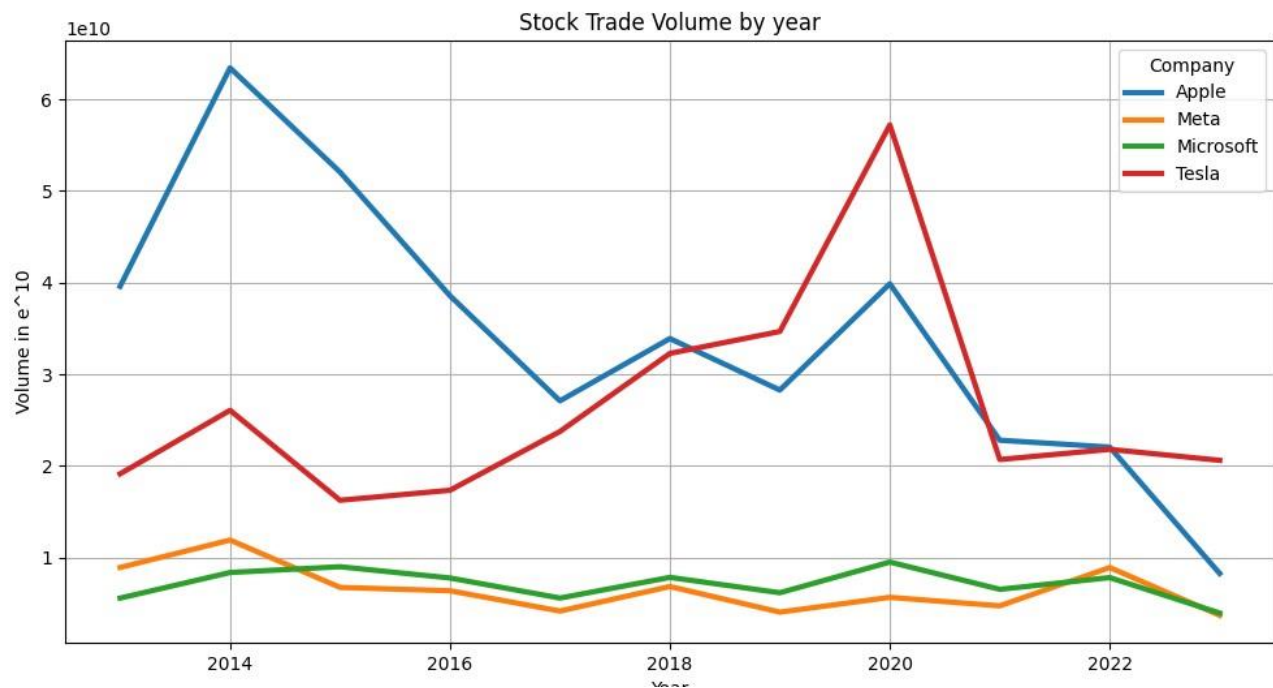

Link to the Git repository:

https://github.com/MShoaibManzoor/Applied-Data-Science-Assignment

Datasets:

https://www.kaggle.com/datasets/khushipitroda/stock-market-historical-data-of-top-10companies/data
https://www.kaggle.com/datasets/osmi/mental-health-in-tech-2016

Exhibit 1: Stock Trade volumes of four well-known Tech Companies:
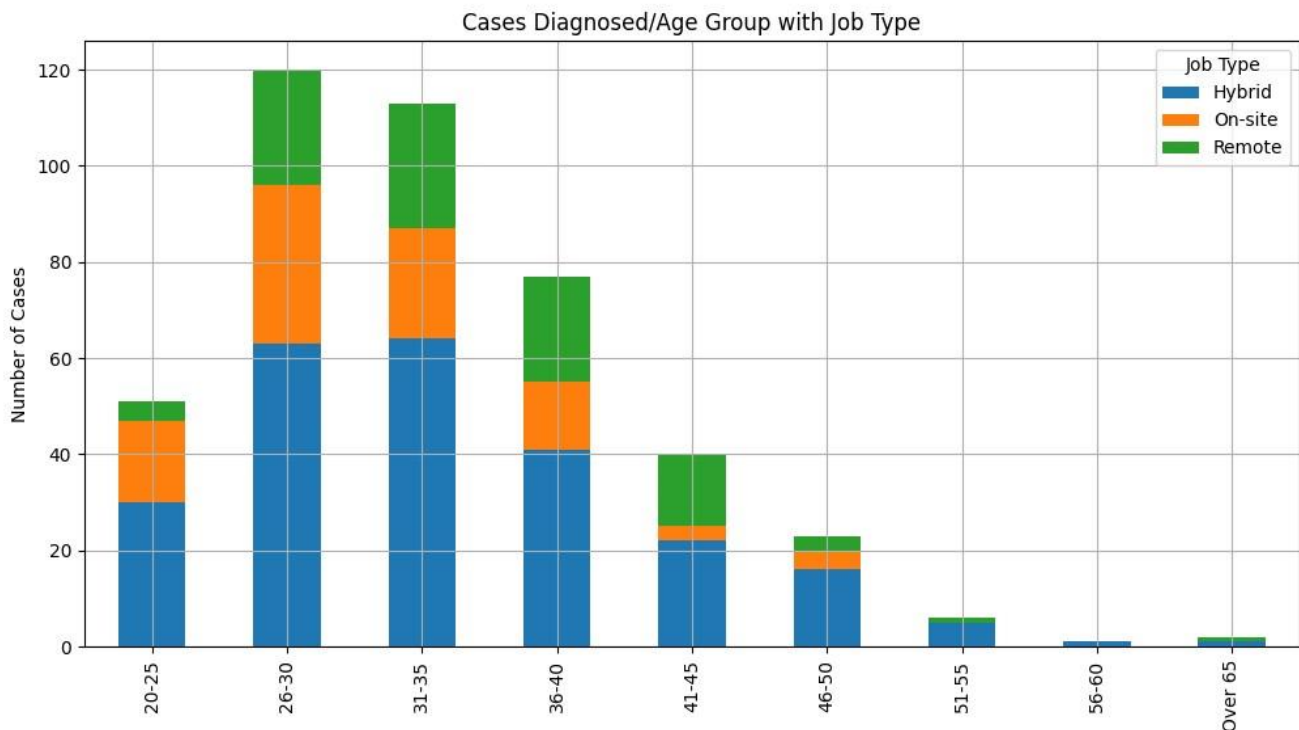

Description:

      The above graph shows the stock trade volumes of the well-known tech companies [1], with a significantly high volume of Apple Inc. due to its mastery in tech industry including hardware and software, but as displayed above the dynamic shifts towards Tesla Inc. between 2018 to 2020 due to the increase in demand for electric vehicles (EVs) and its including in the S&P 500 index making it a part of

the benchmark index for U.S stocks. Arguably Meta and Microsoft Inc. don't belong in the same league as the previously mentioned companies but still hold a very impressive stock volume of approximately 100 billion with minor differences between the two observed between 2014 – 2018 and equalizing after 2022.
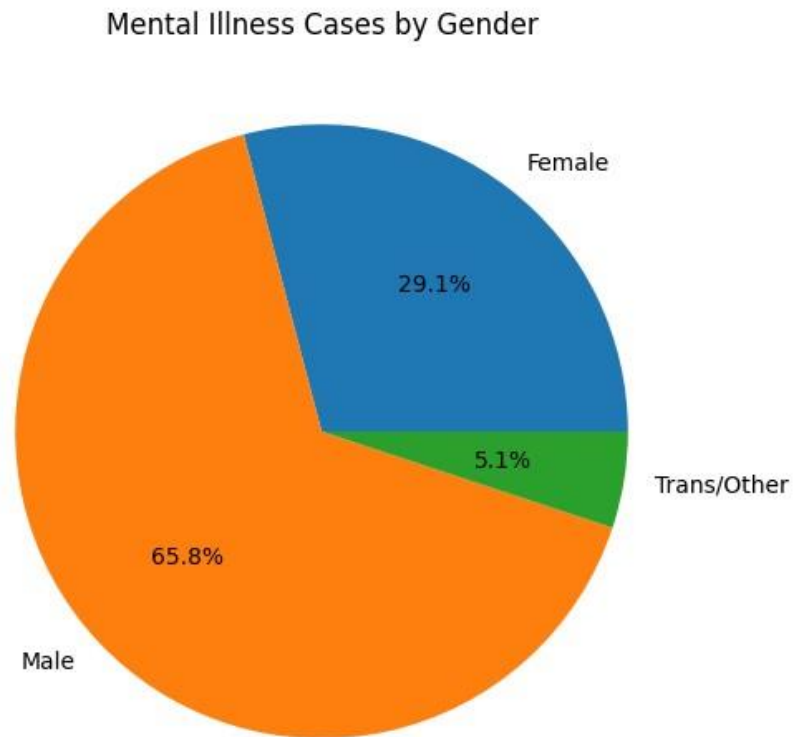
Exhibit 2: Mental illness cases diagnosed in Tech Industry 2016

Cases Diagnosed/Age Group with Job Type

Description:

As we've discussed the stock volumes of major tech companies lets look at the psychological price of their success. The above bar chart describes the diagnosed mental illness cases in tech industry. The dataset has been acquired from the OSMI Mental illness survey conducted in 2016 [2]. Only the cases that have been diagnosed as mentally ill by a doctor have been considered for this study. Most cases belong to the age bracket of young adults between the ages of 26-30, with a steady decline observed thereafter. The job type refers to the conditions that the employees have been observed in as either Remote (working from home, highlighted by the pandemic of 2019 and 2020) contributing the least number to total cases, On-site, as the name suggests, working from the office of employment or the site they have been posted to, and finally, Hybrid working as being called to office on important occasions and working from home during other cases contributing the most the number of cases.

Exhibit 3: Mental Illness cases observed between genders.

Mental Illness Cases by Gender

Description:

      The final exhibit shows the number of the afore-mentioned mental illness cases distributed among genders with males taking up 65.8% of the total cases and female contributing a 29.1% determining the resilience of women in the field of Information technology. Also, with a 5.1% of transgender individuals, portraying a definite mental strength in the said field.