The Affects of Artifical Intelligence

(COMP3125 Individual Project)

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*Abstract*— Dives into how AI has changed in the short time it has been out. This explores the finances, organizations, and job market surrounding AI.

Keywords—Artificial Intelligence, Job Market, Organizations, AI, Data

# Introduction (*Heading 1*)

The topic of my Individual Project is about AI and how it is and will affect our lives. As a Computer Science major Artificial Intelligence is a very important topic in the major. It is new and rapidly growing so learning about AI in the early stages will help in the future. AI is given some sort of dataset and it analyzes this data and use it to perform certain tasks [1]. This allows AI to be incredibly versatile. You can implement is in practically any instance. This is the reason it is so important to research it. With the capabilities that AI has it will grow even faster the more programmers advance with AI. So learning how it has already affected the world the little time it has been is important

# Datasets

## Source of dataset (Heading 2)

For my first dataset it is called The Rise of Artificial Intelligence. This dataset was downloaded on Kaggle was from Muhammad Rohan Riaz. This dataset was updated 2 months ago. Although it does not say how the data was collected based on the views and downloads of this dataset it seems to be credible. Also based on other sources the data seem to all trend in the same way. The second dataset that was used is called AI Global Index. This dataset was downloaded from Kaggle and was by Kateryna Meleshenko. This was updated 2 years ago. Based on what the website says from the author it was created by the UK for the purpose of the first AI safety Summit.

## Character of the datasets

This dataset was in the form of a excel sheet and was already a csv file. The data set has 9 rows in all. The first one is titles for the columns. There are 23 columns in all. The first column contains the years which is from 2018 to 2025. I did not use the 2025 data because I did not feel it was relevant in this specific project. In the rest of the columns contains the actual data. In each column the data is represented differently. It ranges from millions of dollars, billions of dollars, trillions of dollars, and percentages. I converted all the numbers from percent to normal base 10. This is because if it were a percent, I could not convert the data from a string to a float value. The data in the dataset was divided into eight different categories: Talent, Infrastructure, Operating Environment, Research, Development, Government, Commercial, and total score. All of these eight categories the units are based on point out of 100.

# Methodology

## Method A

For all of my questions I used Matplot in order to create a visual. This method I found was the easiest way in order to completely understand each of the questions. Although I could have used different methods and models when I was experimenting with what was the best the line graph remains on top. It was able to easily visualize the data that was found and was easy to come up with a conclusion from. All of the data that I found from each of the questions all was in an easy format for matplot.

# Results

## Result A

A screenshot of a graph

Description automatically generated

A graph with blue and orange lines

Description automatically generated

For the first question it looked at where the countries comparted based on their involvement with AI. This looked at eight different categories: Talent, Infrastructure, Operating Environment, Research, Development, Government, Commercial, and total score. This question is going to help gain more knowledge on the world’s involvement in AI as most people only think of their own country and not others. The United States came out on top in the total score with China only about 37.08 points behind the US. Then France is at the 10th place with a score of 34.42. The difference in just the top 10 tells us so much about AI in the world. The US is putting so much more resources into AI in terms of development than any of the other countries.

## Results for Question 2

A graph with different colored lines

Description automatically generated

A graph with blue and orange lines

Description automatically generated

For the second question it was looking at AI and how organizations have adapted in the past 7 years. First the revenue of AI and the market value was compared. Although the revenue of AI has been going up since 2018. The actual market value of AI skyrocketed starting in 2023. Far exceeding the revenue. Keeping this in mind, now we look at three things: Organizations using AI, planning to implement AI, and prioritizing AI in strategy. These are all in terms of percentages. According to the findings most companies have prioritized AI in strategies starting is 2018 at 83% and jumping to 89%. Companies planning the implement AI has had a greater increase and value to start with that the companies that are already using AI. Which make sense when we look back to the market value jump in 2023.

## Results for Question 3

#### A graph with a line Description automatically generated

#### For the third question we look at how the increase in AI has affected the job market. We look at this in three different instances: the net job loss in the US, the estimated jobs eliminated by AI, and the estimated jobs created by AI. All the data for this questions is in terms of percentages. When we look at the data for net job it seems to have been decreasing since 2018. When we look at both how AI has eliminated and created jobs , we see that they both have been increasing at a great rate since 2018. Estimated jobs eliminated by AI was a greater starting point and also rises at a much greater rate than the job created. This leading me to believe that at this current year AI does not seem to have a large effect on the job loss. If this was the case we would see the net job loss in the US have a similar slope to that of the eliminated jobs by AI. With how the data seems to be going though it seems that AI may start to have a larger impact on the job market as years go on.

# Discussion

With this project I feel that my biggest problem came with my datasets. Finding data on AI in terms of the questions that I picked served more difficult than expected. This led to my data and results not being as accurate as I wanted. The units of some of the data was not exactly what I would have wanted. Mainly the percentages, I would have wanted more numerical based data than percentage based.

# Conclusion

In conclusion AI is something that is up and coming. Right now, it does not seem to be having a great affect. With how rapidly all the data seems to be increasing not so far in the future we can start to see what these rapid increases will do to companies, job market, and around the world.

##### References

1. K. Meleshenko, “Ai global index,” Kaggle, https://www.kaggle.com/datasets/katerynameleshenko/ai-index (accessed Dec. 8, 2024).
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