

## Original Work Set-Up & Completion Summary

- ***Introduction and Statement of Purpose***

My plan was to create an AI model to predict the daily demand for certain goods at businesses. However, I ended up designing the architecture of such a model. Even though this is not what I intended originally, it still fulfills my purpose of demonstrating the benefits of artificial intelligence. This hypothetical model will use past sample data of businesses to predict how many items will be sold daily. This, in turn, will aid small businesses with issues involving the stock and allocation of resources. Moreover, my model will also save money and accurately forecast the demand of items. Lastly, the original work will display the planning and work that goes behind coding such models.

- ***Review of Skills and Research***

For my original work product, the research topics that were instrumental in aiding me were the topics of artificial intelligence and machine learning. To clarify, a prediction model, which is essentially what I was designing an architecture for for my original work product, is a subset of machine learning. This is because training a model based off of previous data requires the knowledge and concepts of AI/ML.

The skills that I have learned that were utilized in the creation of my original work are the concepts of artificial intelligence, and its usage in everyday life. Previously, with many of my research assessments, I read about the implementations of artificial intelligence in workplaces. This helped me theorize the plan for my original work, and the purpose of my project. Based on previous research articles, I understood that one of the biggest uses of AI/ML is the usage of predictive analytics to describe forecasts for businesses. Therefore, I knew I wanted to use this concept for my original work, and set out to solve a specific problem using predictive analytics. Additionally, I needed to find expertise in the field of machine learning and data analytics, in order to design the plan for my model.

- ***Methodology***

- **Materials**

I needed to use Google Slides to create a presentation. Furthermore, I needed to utilize editing software to create my visual aids. Lastly, I used multiple research articles in order to educate myself on the vocabulary used to present AI predictive models.

- **Description of Process and Procedures:**

Firstly, I researched the coding programs that are used to code such models. Next, I explored the concepts behind AI predictive modeling, so that the information I put in my original work presentation was accurate and precise. Finally, I created models and visual aids to help my audience understand the process behind an AI predictive model.

- ***Utilization of Higher-Level Thinking Skills***

The knowledge and higher level thinking skills I utilized in order to create my original work included synthesizing a project based off of my previous knowledge of AI/ML, and then designing the architecture of a model. Furthermore, I educated myself more on coding languages and the usage of Python in my project. Additionally, I researched more into data science in order to figure out how I will utilize data in my predictive model.

- ***Conclusions***

The outcome of my original work displays the usage of AI prediction models, and how artificial intelligence can benefit humankind by streamlining the process of data analytics and helping businesses find cost-saving solutions. Moreover, initially I expected to fully code and train my model for my original work. However, based on my initial purpose, I decided to first create the architecture of my model for my original work. This, in turn, would still fulfill my initial purpose of demonstrating the benefits of implementing AI. Additionally, I plan to actualize my model for my final product. Furthermore, I demonstrate through my original work project how AI replicates the conceptualizing aspects of the human brain, and works faster than humans at certain tasks.

- ***Application/Meaning***

My original work details how artificial intelligence can be used to assist businesses in tackling future business challenges and decisions by using the AI predictive model to analyze data. This, in result, also proves that artificial intelligence is beneficial to humans. This applies to the real world by demonstrating the potential of AI software to maximize efficiency. Furthermore, the model my original work details also helps the environment by reducing wastage of resources by predicting the daily demand accurately, rather than businesses overstocking perishable products that will most likely be thrown away. Through this process, I learned the importance of artificial intelligence to society, and that the fear the public has of AI is misled.