Assignment #1

Value: 10%

Assignment Objective-Applying AI in Business:
Intelligent machines enhance human capabilities in many areas. AI applications are being adopted across various industry domains and are being used widely to solve complex problems in finance, manufacturing, health, special needs, cyber security, education, engineering, business, medicine, weather forecasting, etc. The objective of this assignment is to discuss how AI is being used in these domains.

Instructions:

1. Pick **any ONE industry**/ domain/sector of your choice and discuss how AI can be used in that industry. Following are the details expected in the assignment (but not restricted to):
   [Hint: An example of an industry or a domain is Banking, Health, Transportation and Logistics, Media and Publication, Manufacturing, etc]

2. Briefly explain why you chose this domain and its relevance.
   [Hint: Here we explain what is the importance of the chosen industry in your personal life and society as a whole. For e.g., why healthcare is important in our society. It is important for promoting and maintaining health, preventing and managing disease, reducing unnecessary disability and premature death, and achieving health equity for all]

3. What types of AI applications are currently in use in your selected domain?
   [Hint: **Customer Service**: Chatbot, **Marketing**: Product recommendation, **Sales:** Sales forecast, **Finance/Banking:** Fraud detection. Try to provide at least three different types of Ai applications]

4. Name two AI specific applications that have had a significant impact in your selected domain.
   [Hint: Yseop is a Paris-based company with 58 employees. The company offers software called **Yseop Compose**, which it claims can help banks and financial institutions automate report generation using natural language generation. RBC uses our financial spending's data and give visualizations of how our spending pattern was for that month].

5. How do these two AI applications increase the productivity in that specific industry?
   [For example, how Netflix's entire existence is credited to the Recommender system and how this helps them generate their revenue. Or how use of AI in Google search engine has helped Google to increase their customer base. Productivity can be covered from different perspective. It can be based on the revenue these company make, the total customers of the company, the new employment it creates, how it supports the growth of the society.]

6. Briefly explain the AI concept around each of the AI applications you chose above.
   [Hint: Autonomous vehicles: Computer Vision, Chatbot uses NLP, Sales forecast uses predictive engine.]

7. What new AI application would you propose for your selected domain? Explain what benefit this will bring to the domain?
[Here you can propose any application which is not currently been used in the chosen domain but you think will be useful. This is where your imagination will meet reality.]

8. What are the advantages and disadvantages of AI technology in your chosen domain?
[Hint: How Self driving car has its share of advantages and disadvantages.]

9. What are some ethical concerns about the use of AI technology in your chosen domain?
[Hint: Is the specific AI tool violating Human Rights, Promotion of Human Values, Professional Responsibility, safety and security, Privacy. Is there a need for Human Control of Technology, Transparency, Explainability, Accountability?]

This assignment relates to the following Course Learning Outcomes:

CLO4-- Design /redesign business operations to support the adoption and integration of AI into business solutions.
CLO5-- Access the impact of AI on business, society and humans from a positive and negative perspective.

Submission format:

All students should submit a **minimum of 3 pager** document with **Font size of 11.** All the information sourced from the Internet must be **referenced using ACM format**. Please respond to each question separately and use bullet points where needed. I am not looking for an essay response but rather concise and direction responses to each question. Do not respond in essay format.

Assignment Rubric:

Criteria	Exemplary (Directly relevant)	Accomplished (Somewhat relevant)	Developing (Remotely related)	Incomplete (Totally unrelated)	Score
Organization	Well-planned and well-thought out. Direct, concise and complete response.	Information is logically ordered and easily understandable.	Information is disorganized, confusing, unnecessarily long and needs further development.	Details and examples are not organized, are hard to follow and understand.	

Content	Exceptionally well presented and argued; ideas are detailed, well developed, supported with specific evidence & facts, as well as examples and specific details. Have new and original ideas along with existing ones.	Well-presented and argued; ideas are detailed, developed and supported with evidence and details, mostly specific.	Details are somewhat sketchy.	Unable to find specific details.	
Research	Research work is done exceptionally well and they support claims very effectively.	Some lack of clarity in research.	Research conducted are not clear or described.	The work does not use adequate research or if it does, the sources are not integrated well.	
Development	Main points well developed with high quality and quantity support. Reveals high degree of critical thinking.	Main points well developed with quality supporting details and quantity. Critical thinking is weaved into points.	Main points are present with limited detail and development. Some critical thinking is present.	Main points lack detailed development. Ideas are vague with little evidence of critical thinking.	
Proper Referencing	All collected information are documented in ACM reference format.	Correct format but incomplete.	Incorrect format of referencing	No referencing	
Overall Score					