

**Project 6.2**

Ashley Kennedy

University of Advancing Technology

MKT220: Let's Agree to Disagree

Professor Valenzuela

October 20, 2024

For this assignment, you'll use an AI tool to generate responses based on 2-4 prompts

Figure 1.

## Prompt 1: How is AI being used in agriculture? How will AI benefit humans? Will it decrease food costs?

---

**A** How is AI being used in agriculture? And how will this benefit humans? Will it decrease costs of everyday food?

**AI in Agriculture: A Boon for Humanity**

Artificial Intelligence (AI) is revolutionizing the agricultural sector, promising significant benefits to both farmers and consumers. Here's how AI is being used and its potential impact:

**How AI is Used in Agriculture**

- **Precision Agriculture:** AI algorithms analyze vast amounts of data from sensors, drones, and satellites to optimize farming practices. This includes:
  - **Crop Monitoring:** Identifying crop health issues early, such as diseases or nutrient deficiencies.
  - **Irrigation Management:** Optimizing water usage to conserve resources and prevent over-watering.
  - **Pest Control:** Predicting and preventing outbreaks through early detection and targeted treatments.

**Autonomous Farming:** AI-powered robots can perform tasks like planting, weeding, and harvesting, reducing labor costs and improving efficiency.

- **Supply Chain Optimization:** AI can help streamline the supply chain, minimizing food waste and ensuring timely delivery of produce.
- **Yield Prediction:** AI models can predict crop yields based on various factors, aiding farmers in making informed decisions about planting, harvesting, and storage.

**Benefits to Humans**

- **Increased Food Production:** AI can help increase agricultural yields, addressing food security concerns and reducing global hunger.
- **Reduced Costs:** By optimizing resource usage and improving efficiency, AI can help lower the cost of producing food, benefiting consumers.
- **Improved Sustainability:** AI can contribute to more sustainable farming practices by reducing the use of pesticides, fertilizers, and water.
- **Enhanced Food Safety:** AI can help detect and prevent foodborne illnesses by monitoring production processes and ensuring compliance with safety standards.

While AI has the potential to significantly impact the agricultural industry, it's important to note that its adoption may require substantial investment and address concerns related to data privacy, job displacement, and potential unintended consequences. However, when implemented responsibly, AI can play a crucial role in ensuring a more sustainable and efficient food system.

*Note.* Screen shot of verbiage generated with prompt, “How is AI being used in agriculture?

How will AI benefit humans? Will it decrease food costs?” by Google, Gemini (2024)

<https://gemini.google.com/>

Figure 2.

**Prompt 2: How is AI being used in agriculture? What are the benefits?**

---

**A** How is AI being used in agriculture? And how will this benefit humans? Will it decrease costs of everyday food?

**AI in Agriculture: A Boon for Humanity**  
Artificial Intelligence (AI) is revolutionizing the agricultural sector, promising significant benefits to both farmers and consumers. Here's how AI is being used and its potential impact: ▾

**How AI is Used in Agriculture**

- **Precision Agriculture:** AI algorithms analyze vast amounts of data from sensors, drones, and satellites to optimize farming practices. This includes:
  - **Crop Monitoring:** Identifying crop health issues early, such as diseases or nutrient deficiencies. ▾
  - **Irrigation Management:** Optimizing water usage to conserve resources and prevent over-watering. ▾
  - **Pest Control:** Predicting and preventing outbreaks through early detection and targeted treatments. ▾

- **Autonomous Farming:** AI-powered robots can perform tasks like planting, weeding, and harvesting, reducing labor costs and improving efficiency. ▾
- **Supply Chain Optimization:** AI can help streamline the supply chain, minimizing food waste and ensuring timely delivery of produce. ▾
- **Yield Prediction:** AI models can predict crop yields based on various factors, aiding farmers in making informed decisions about planting, harvesting, and storage. ▾

**Benefits to Humans**

- **Increased Food Production:** AI can help increase agricultural yields, addressing food security concerns and reducing global hunger. ▾
- **Reduced Costs:** By optimizing resource usage and improving efficiency, AI can help lower the cost of producing food, benefitting consumers. ▾
- **Improved Sustainability:** AI can contribute to more sustainable farming practices by reducing the use of pesticides, fertilizers, and water. ▾
- **Enhanced Food Safety:** AI can help detect and prevent foodborne illnesses by monitoring production processes and ensuring compliance with safety standards. ▾

While AI has the potential to significantly impact the agricultural industry, it's important to note that its adoption may require substantial investment and address concerns related to data privacy, job displacement, and potential unintended consequences. However, when implemented responsibly, AI can play a crucial role in ensuring a more sustainable and efficient food system. ▾

*Note.* Screen shot of verbiage generated with prompt, “How is AI being used in agriculture? What are the benefits?” by Google, Gemini (2024) <https://gemini.google.com/>

Figure 3.

## Prompt 3: How is AI being used in agriculture? Are there any negative consequences?

---

**A** How is AI being used in agriculture? And how will this benefit humans? Will it decrease costs of everyday food?

**AI in Agriculture: A Boon for Humanity**

Artificial Intelligence (AI) is revolutionizing the agricultural sector, promising significant benefits to both farmers and consumers. Here's how AI is being used and its potential impact:

**How AI is Used in Agriculture**

- **Precision Agriculture:** AI algorithms analyze vast amounts of data from sensors, drones, and satellites to optimize farming practices. This includes:
  - **Crop Monitoring:** Identifying crop health issues early, such as diseases or nutrient deficiencies.
  - **Irrigation Management:** Optimizing water usage to conserve resources and prevent over-watering.
  - **Pest Control:** Predicting and preventing outbreaks through early detection and targeted treatments.

- **Autonomous Farming:** AI-powered robots can perform tasks like planting, weeding, and harvesting, reducing labor costs and improving efficiency.
- **Supply Chain Optimization:** AI can help streamline the supply chain, minimizing food waste and ensuring timely delivery of produce.
- **Yield Prediction:** AI models can predict crop yields based on various factors, aiding farmers in making informed decisions about planting, harvesting, and storage.

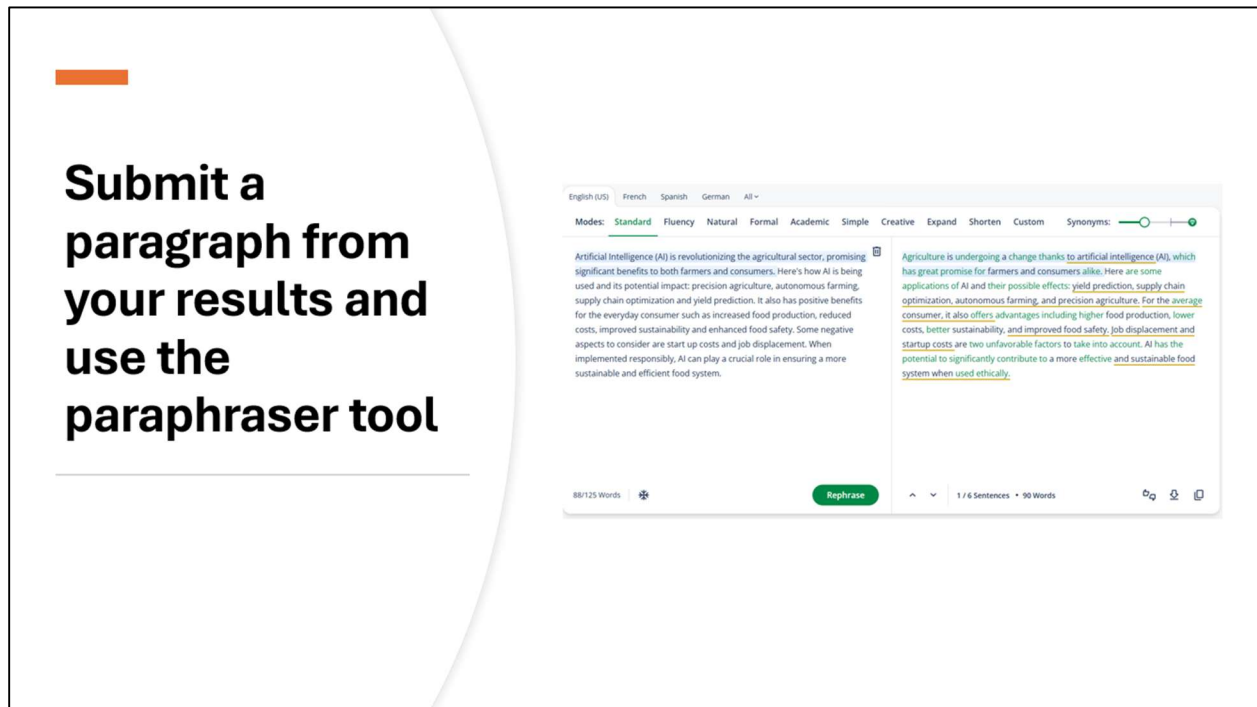
**Benefits to Humans**

- **Increased Food Production:** AI can help increase agricultural yields, addressing food security concerns and reducing global hunger.
- **Reduced Costs:** By optimizing resource usage and improving efficiency, AI can help lower the cost of producing food, benefiting consumers.
- **Improved Sustainability:** AI can contribute to more sustainable farming practices by reducing the use of pesticides, fertilizers, and water.
- **Enhanced Food Safety:** AI can help detect and prevent foodborne illnesses by monitoring production processes and ensuring compliance with safety standards.

While AI has the potential to significantly impact the agricultural industry, it's important to note that its adoption may require substantial investment and address concerns related to data privacy, job displacement, and potential unintended consequences. However, when implemented responsibly, AI can play a crucial role in ensuring a more sustainable and efficient food system.

*Note.* Screen shot of verbiage generated with prompt, “How is AI being used in agriculture? Are there any negative consequences?” by Google, Gemini (2024) <https://gemini.google.com/>

Figure 4.



*Note.* Screen shot of paraphrase by, Quillbot (2024) <https://quillbot.com/paraphrasing-tool>

**Write an argument or persuasive paper based your topic from Discussion 7**

### **AI-Powered Farming**

AI Powered Farming is the future of agriculture. An article from forbes.com, “The Dawn Of AI In Agriculture Is Harvesting The Future” has a quote that capsulates the benefits perfectly. It states, “As we stand amidst this technological renaissance in agriculture, it's clear that AI is not just a tool; it's a catalyst for a new era of farming”. Farmers can transition from archaic methods passed down from generations of ancestry guidance and embrace the evolution of AI powered farming.

Farmers can say goodbye to long days and nights of manual labor, worker shortages and poor sustainability and hello to their new companion in AI farming. With AI farming, farmers can utilize a plethora of benefits, such as:

- AI Algorithms – With this, farmers can analyze soil conditions and weather patterns.
- AI Crop Monitoring – AI can identify crop diseases or nutrient deficiencies (all from a photo). AI can also predict pest invasions.
- Automated Farming – Robots can be used to weed crops at a faster and more accurate rate than humans.
- Sustainable Farming – Applications are being developed to leverage science and scenario planning to analyze what seeds will have sustainability in specific areas and which ones will have the most positive impacts to the local communities.

I'm sure at this point in my persuasive argument you're wondering about the negative aspects AI farming could have. One of the main concerns that is brought up is “won't this take

jobs away from everyday people”. From my perspective feeding the world far outweighs employment. And with that being said, farmers are facing serious labor shortages. If anything, AI powered farming will solve this problem. An article on npr.org, “America's Farms Are Facing A Serious Labor Shortage” lays out the current predicament farmers are in. Decades ago, farmworkers would come from Mexico and would travel the U.S. in search of seasonal work. Farmers are now finding that farmworkers are choosing to settle down or are aging out. Furthermore, it showing that their children and grandchildren are finding employment in other sectors. And who can blame them? According to the U.S. Bureau of Labor Statistics agriculture workers median pay for 2023 was \$34,790 per year and \$16.73 per hour. That’s hardly a livable wage. According to cnbc.com in order to live comfortably in the United States, you need to make \$68,499 annually. So, you can see why farmworkers and their families are opting for different career paths. For me, I see a future of hybrid farms, where information technology can employ workers to operate and understand their AI tools, ultimately creating new jobs.

Let’s beat world hunger and embrace AI powered farming. The pros far outweigh the cons. In conclusion, I would like to leave you with some statistics from theworldcounts.com. Please allow these numbers to simmer as we push to fight and encourage the new dawn of farming and agriculture.

- Around 9 million people die every year of hunger and hunger-related diseases. This is more than from AIDS, malaria and tuberculosis combined.
- A child dies from hunger every 10 seconds
- 24% of the world population live in areas of food insecurity
- Of the 822 million undernourished people in the world, 113 million face acute hunger meaning they are in urgent need of food and nutrients.

## References

Sahota, N (July 23, 2024). The Dawn of AI In Agriculture Is Harvesting the Future. Retrieved October 19, 2024 from <https://www.forbes.com/sites/neilsahota/2024/07/23/the-dawn-of-ai-in-agriculture-is-harvesting-the-future/>

Venkat, M (July 30, 2023). America's Farms Are Facing A Serious Labor Shortage. Retrieved October 19, 2024 from <https://www.npr.org/2023/07/27/1190476628/americas-farms-are-facing-a-serious-labor-shortage>

Occupational Outlook Handbook (2023). Agricultural Workers. Retrieved October 19, 2024 from <https://www.bls.gov/ooh/Farming-Fishing-and-Forestry/Agricultural-workers.htm>

Engel, I (April 4, 2023). The salary you need to live comfortably in 15 major U.S. cities. Retrieved October 19, 2024 from <https://www.cnbc.com/2023/04/04/the-salary-you-need-to-live-comfortably-in-15-major-us-cities.html#:~:text=Overall%2C Americans need an average post-tax income of,the U.S.%2C according to recent data from SmartAsset.?msocid=3063231bcc7c6080111837d5cd7b6100>

The World Counts (2024). Global Challenges. Retrieved October 19, 2024 from <https://www.theworldcounts.com/challenges/people-and-poverty/hunger-and-obesity/how-many-people-die-from-hunger-each-year>