

## Sustainability Solutions and ChatGPT

### Goals:

- Evaluate viable solution for your defined sustainability problem
- Analyze if ChatGPT can pose a logical, fact-based solution to your posed problem and constraints
- Determine what role ChatGPT (or other Generative AI platforms) may play in the engineering design process

### Background:

We all know tools like ChatGPT can generate information and interesting arguments when given a prompt. The real question is: do you trust what ChatGPT generates? It is your responsibility to actively challenge, question, and analyze arguments AI generates in response to your prompts. This activity is aimed at intentionally making you think about:

- Solutions to your proposed sustainability problem (including given constraints and success criteria)
- Using tools like ChatGPT to gain and analyze information
- Determining accuracy of facts included in arguments generated by an AI tool like ChatGPT
- Analyzing the efficacy and logic presented in response to your prompt

### What to Do:

- 1) Open ChatGPT
- 2) Ask ChatGPT to generate a 4 - 5 paragraph essay that proposes a solution to your sustainability problem.
- 3) Open a word doc and title it “ChatGPT solution to \_\_\_\_\_” (fill in the blank with the title of your problem)
- 4) Retype your prompt at the top of your document in **bolded** font
- 5) After running ChatGPT, copy and paste what ChatGPT generates into this document and make the font blue (yes, this is the only time you can copy and paste from this website)
- 6) Read through what was generated and answer the following in the document:
  - a) **Highlight** “facts” that were generated supporting the argument

- b) For each “fact” presented, find one outside source (not ChatGPT) that would support this fact and list it in **red** under the essay. You may not ask ChatGPT to site it’s sources (it can’t do that); you must find resources that support what ChatGPT wrote. In **green**, write the source and identify if the source does support the fact completely and why.
  - c) Re-read the argument. In **purple**, answer the following:
    - i) Does this argument make sense?
    - ii) Do the “facts” support the argument?
    - iii) Was there even an argument made or does it leave the reader with more questions than answers?
    - iv) What do you agree with in this essay and what do you question or disagree with in this essay?
    - v) What could you do to make the argument or answer to your prompt stronger and more convincing?
- 7) Reflect (at least 4 sentences each):
- a) If you had been assigned to argue what you think is the solution to your problem, would you have used ChatGPT at all as a resource? If so, how?
  - b) Based on this activity, what role do you think Generative AI could play in the engineering design process? Explain.