

1. **Select a Topic:** Environmental Economics

2. **Finding a Research Paper:**

Modeling carbon dioxide emissions in power plants: a perspective on smart cities and low-carbon economy

3. **Generate Summaries:**

- a) The research paper focuses on modeling CO₂ emissions in power plants in the Kingdom of Bahrain using quadratic regression techniques to understand the relationship between variables
- b) It highlights the importance of reducing CO₂ emissions by transitioning to sustainable energy sources like renewables and implementing policies to incentivize renewable energy adoption
- c) The study discusses the challenges and advantages associated with CO₂ compression processes for transportation and the impact of carbon loss on CO₂ emissions
- d) It emphasizes the need for investment in renewable energy infrastructure, energy efficiency measures, and public awareness to reduce CO₂ emissions and transition to a low-carbon economy
- e) The research paper also mentions the growth of electricity demand in Bahrain, its impact on CO₂ emissions, and the use of curve-fitting techniques for estimating electricity generation.

4. **Suggest Applications:** *Use prompts to suggest potential applications or implications of the research findings.*

- a. Modeling CO₂ emissions in power plants for smart cities and economy.
- b. Renewable energy integration for CO₂ emission reduction.
- c. Energy optimization for efficiency improvements in coal-fired power plants.

5. **Evaluate Summaries and Insights:** *Assess the generated summaries and insights based on clarity, accuracy, and relevance.*

- a) Polynomial regression correlates CO₂ emissions with power plant capacity.
- b) Future CO₂ emission values are estimated using regression models.
- c) Installed electricity capacity ratio determines power system delivery hours.
- d) Model data using polynomial regression for CO₂ emissions and electricity capacity.

6. **Reflect and Document:** *Reflect on your experience, document the prompts used, the generated summaries, insights, and your evaluation.*

The exercise helped me to think in a proper manner and reflect upon what prompts could lead me to the accurate or the desired results.

I had used typeset.io – a research AI tool for this assignment which my work much easy. It has well-structured sets of prompts specially curated for writing research papers. So hadn't to struggle with writing propmts.

I simply wrote to summarise the research paper, ananalyse and find the results and it did it.