

Workshop Agenda

Enhancing Energy Economics with AI

Tuesday, November 12, 2024, KAPSARC (APEX – 1st floor)

9:30 a.m. – 4:30 p.m.

Please note: timings are subject to change

9:30 a.m. Check-in and Registration

Session 1: Understanding ChatGPT and LLM Models

9:30–10:00
a.m.

- What is ChatGPT?
- How Does ChatGPT Work?
- Generative Pre-trained Transformers (GPT)
- Training and Fine-Tuning
- Comparing AI Models and Neural Networks

Session 3: Chain-of-Thoughts and other Prompting Strategies

10:00–10:30
a.m.

- What is prompting
- Prompt engineering
- Reasoning

10:30 – 10:45 a.m. Coffee Break

Session 3: Practical Applications of AI in Economics

10:45 a.m.–
12:00 p.m.

2.1 Textual analysis

- Efficient Literature Search
- Sentiment analysis
- Talking to Scientific Articles and efficient information extraction
- Group exercise to Master the Material

12:00 – 1:00 p.m. Lunch

Session 4: Advanced Data Analysis Techniques	
1:00 – 2:00 p.m.	<ul style="list-style-type: none"> Utilizing AI for Advanced Data Analysis <ul style="list-style-type: none"> Practical Examples and Exercises Automation of Routine Tasks <ul style="list-style-type: none"> Efficiency Gains and Productivity Improvements Real-World Applications
Session 5: Coding with ChatGPT	
2:00 – 3:00 p.m.	<ul style="list-style-type: none"> Generating and Executing Python Code <ul style="list-style-type: none"> Programming in Python using English Executing the Code within ChatGPT and outside Real-Time Demonstrations <ul style="list-style-type: none"> Q&A Sessions with ChatGPT Practical Exercises
Session 6: Addressing the Risks and Ethical Considerations	
3:00 – 3:30 p.m.	<ul style="list-style-type: none"> Understanding AI Limitations <ul style="list-style-type: none"> Hallucinations and Errors Bias and Fairness in AI Outputs Ethical Considerations <ul style="list-style-type: none"> AI in Policy Making Data Privacy and Security
3:30 – 3:45 p.m. Coffee Break	

Session 7: AI Tools for Economists

3:45 – 4:00
p.m.

- Talk to KAPSARC RESEARCH
 - Introducing KAPSARC GenAI literature survey tool (Amar)
- Overview of customized GPT agents
 - ScholarAI, Wolfram Alpha, and Others
- Practical Demonstrations
 - Integrating AI Tools into Economic Research
 - Case Studies and Examples

Session 8: Brainstorming and Feedback

4:00 – 4:15
p.m.

- Collaborative Brainstorming Sessions
 - Potential AI Applications in Economics
 - Group Discussions and Feedback
- Using AI for Creative Problem Solving
 - Generating Ideas and Solutions
 - Practical Exercises

Session 9: Writing and Editing with AI

4:15 – 4:25
p.m.

- Enhancing Writing Skills
 - Editing and Proofreading with AI
 - Generating Content and Summarizing
- Practical Exercises
 - Improving Research Papers and Reports

Session 10: Closing Remarks and Future Directions

4:25 – 4:30
p.m.

Q&A and Networking