{% include base_path %}

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- This is a policy is written for my advanced classes: Applied Economics with Sports Data, Data
 Analysis 3 Prediction and ML. Data Analysis 4 Causal Analysis. It also applies to term papers and
 theses.
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Al policy: Enjoy "Al" with moderation

This policy is aimed at more advanced classes and assume that you already have core coding and statistics/econometrics skills. The abundance of Al means that the process of doing data analysis projects has changed, and these tools are becoming essential help.

Al has become part of our lives, and most people are using it regularly. I assume you will use Al as a tool to enhance your work. Moreover, the ability to use "Al" as copilot, carry out prompt engineering is a new and important skill to learn and practice.

However, you should my course to develop skills in understanding applied economics and data analysis, master econometric methods and get experience working with data. You will learn how to think about connecting ideas, methods and find appropriate data to test them. **You are responsible** for all aspects of your work. All is like search, it's helpful but use it as an input. You must carefully check and debug any input from Al.

Al can help you in all the steps, but you need strong foundations to become a scholar or an applied economist who uses Al but is not just a vehicle for LLMs. My advice is to use new tools but at the same time remain able to do most work without them. **Enjoy "Al" with moderation**: find a balance between learning the material as well as get practice with Al tools.

In my view, there is no way to police the use of "Al" tools, so no point in trying. Yes, I can often attach a higher likelihood of Al use but not certain enough to act on it. This implies **ethical consideration** for students -- they shall be encouraged to show self-restraint for the benefit of their future self.

Definitions

PROFESSEUR: M.DA ROS

- 1. I define "Al" here as Large Language Models based methods and tools including OpenAl's ChatGPT, Github Copilot, Google's Gemini, Anthropic's Claude, Mistral's Le Chat, DeepSeek, Facebook's Llama and other available open source or propriatery models and tools.
- 2. Prompting means communication with "AI" tools such as asking questions or checking code.

This is now heavily revised from early 2024

Al (LLMs) have changed a great deal. So did its prevalence and use cases. I'm now trying to adapt.

Policies for assignments, papers, presentations

Reading papers:

You must read papers on your own first. Try suffering through harder bits to develop your economics and econometrics skills. But you are encouraged to use Al to ask questions about technical aspects of the model or the methodology as well as the institutional context.

Some suggestions: how can AI help

- Learn more about topics by having a conversation with AI on the material. You may copy text into it and ask for help in understanding details, and clarifications.
- Ask about context, background
- Help with derivations, maths.

Presentations.

You are expected to understand the paper you present deeply and create the content of the presentation on your own. But, as the presentation is expected to be well crafted, engaging and pretty and you are encouraged to use Al like ChatGPT to assist in creating and enhancing the presentations. (You must use a markdown or tex based editor, no PP, please.)

Some suggestions: how can AI help

- Technical help re markdown/quarto or latex/beamer, etc formatting
- General help re formatting, simplifying slides
- Graphics, videos

Short essay

For the short essay, my advice is start with the review papers but also use AI to help you find papers. You can also use AI to pin down the main idea for the paper. Then, I suggest you write a full draft. Most people do the thinking while writing. Thus, the first draft should not be outsourced to AI. Then you can ask AI to give you feedback, like a referee report. You may well do a rewrite based on ideas (pick and choose and act on what you think is relevant, don't accept all suggestions, as some are rubbish.). Then you can use AI to polish. However, beware that most AI have a somewhat artificial and bullshit-y language. So, focus on correct grammar, but make sure your voice remains.

Some suggestions: how can AI help

- Idea generation, thinking about causal pathways
- Language improvement, translation

Coding

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You may use any "AI" assistance for coding. Note that you carry all responsibility for the correctness of your code. Please test and debug your code relentlessly. Moreover, the availability of AI for coding means, I expect high quality code, well commented. Clear structure, functions, good coding practices.

You are responsible for your code no matter how and how wrote the actual lines.

You will be expected to understand all aspects of your code and be able to explain it clearly. I will sometimes ask you to do that in class.

Some suggestions: how can AI help

- Drafting code snippets, turning code bits into functions,
- Improving code, commenting it
- Translate from one language to another, like stata to R.
- Help create tables and graphs
- Debugging

Data Analysis report

You shall design data wrangling and plan do the analytical work first without AI. Decide on how the work data shall look like. Think about which methods you'd like to pursue and compare. Then comes AI, get help re actual work, find packages, ask help re comparing tools. In many cases, especially with common issues, AI will suggest great solutions. In other cases, such as graphics, AI will be great to get to about 80% of what you'd want.

In terms of discussing your results, AI will be very good (like "A-", sometimes even "A") in simpler tasks, such as descriptive statistics and good but not perfect (like A- to B) in econometrics. It will be convincing, but often imprecise. I will always ask for maximum precision. Thus, it is vital that you check all code, output, texts.

Here as well, I urge you to try do as much as possible without AI first, and use AI as tutor (who can I do better) and reviewer (check if this makes sense). See the first point: you shall learn to do most alone so that you can confidently evaluate AI later.

More

Check out my [Data Analysis with AI course])(https://gabors-data-analysis.com/ai-course/)