

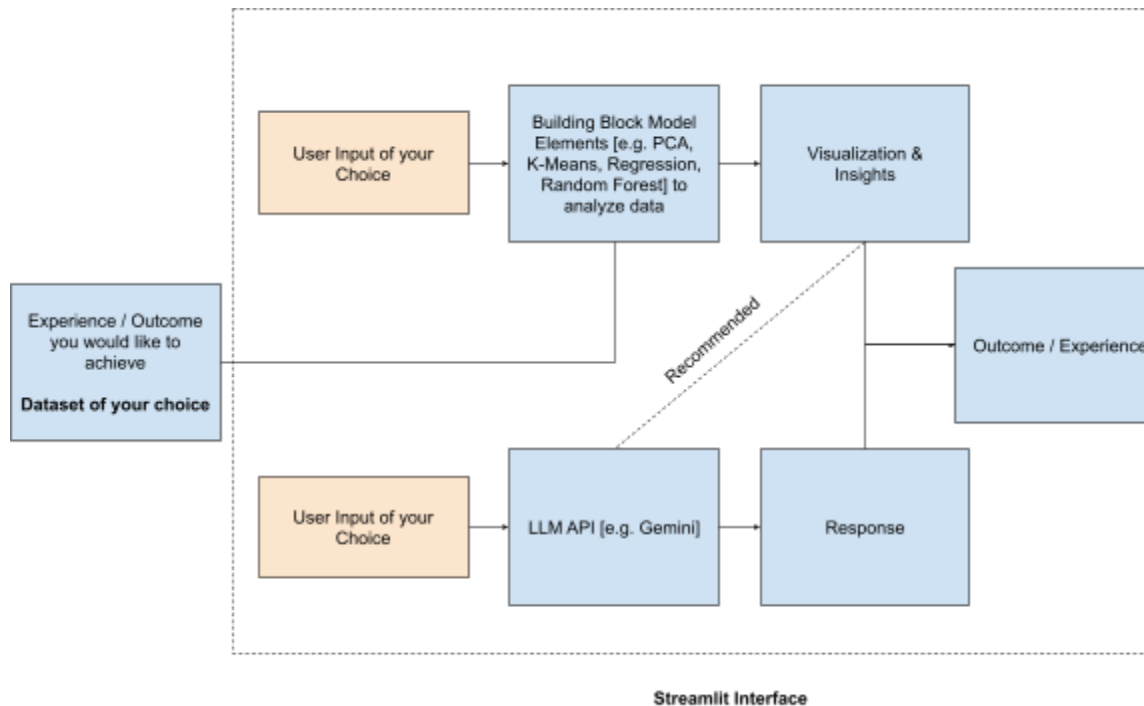
Assignment I-13a & I-13b

Mini-Project: Building Blocks + LLM's

This **individual** assignment encapsulates some of the ML/AI discussions we have been having. In this assignment, you will:

- Determine an experience / outcome you would like to deliver through a web app based experience.
 - You will prototype this using Streamlit (unless you would like to go above and beyond - which you are welcome to! - the minimum functionality is a web-app prototype using the tools outlined below), so there are limitations in terms of UX on what can be achieved.
- Select a dataset that will help realize that outcome.
- Apply one of the basic 'building block' models we have discussed to analyze this data and create a visualization of the results.
 - Have at least one interactive feature.
 - Perform at least one check / control to validate the model performance [e.g., checking for multicollinearity in regression]
- Use an LLM API - we recommend Gemini for its no-cost implementation - to help support the experience. Have at least one level of user input to shape the LLM's response.

The diagram below should assist in explaining this.



Deliverables

In class on 12/4, we will have concept proposals and prototype showcases - a short slide-based presentation where we will collectively workshop and support / expand your ideas.

Final deliverables will be due 12/13:

- Code
- Working web application
- Portfolio / Case-study-ready documentation of the finished product

Submit a .ipynb file including code, visualizations, and explanations.

Code from the 'AI-Module' in Ritu's Repo will help you execute this task:

<https://github.com/ritu1412/AI-Module> [Look in the "AI folder"]

Code explanation video:

https://drive.google.com/file/d/1QOAmvaw857TGeJ9_4DaW1H8WuJgaU8lZ/view?usp=sharing

1. Deliverables for 12/4 [I-13a]

- A 3-slide presentation on:
 - what the experience/outcome you are seeking to achieve is;
 - The data set you have selected
 - How you will integrate / use building blocks + LLM's to achieve the outcome you have identified
- A rough (not necessarily working) prototype with code, illustrating progress and clarity on the above three

2. Deliverables for 12/13 [I-13b]

- A working prototype web app
- A portfolio-/case-study-level presentation of this work, showcasing:
 - Design rationale
 - Justifying technical and design decisions
 - Visual fidelity
- Evidence in the prototype / deliverable of the skills you want to showcase:
 - If you are interested in UI/UX Design: work on the interface and interaction, the decisions you made re: both, and how you might assess both
 - If you are interested in UXR: conduct some supplemental user research to justify/explain/motivate your decision-making!
 - If you are interested in Product Strategy / PM: focus on illustrating the “jobs to be done” and how the technical and design decisions you’ve made illustrate both
 - If you are interested in Creative Technology / R&D: do something crazy!
 - Etc.
- This is for the class - but it’s really for you and your portfolio!