Team Members -
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Our project focuses on developing an AI agent that can automatically generate data pipelines and visualize data for nontechnical users. This tool is designed to make complex data analysis more accessible, helping individuals and organizations make informed decisions without needing advanced technical skills. While the potential impact of this project is significant, there are several key constraints that shape how we approach its design and implementation. Among the most important are economic, professional, ethical, and legal considerations. Each of these areas presents challenges that must be carefully understood and addressed to ensure the success and integrity of the final product.

For the economic constraints, there are financial limitations regarding the complexity of the model we can use. Larger and more capable models like GPT-5-Thinking and Gemini-2.5-Pro have higher API costs. But, this is something that can be handled cleverly through model swapping depending on the complexity of the task at hand. Models like GPT-4o and 4o-mini are highly capable depending on the task. For non-model related tools, we will be using freeware alternatives that we can either self host or are provided online using our student plans (Azure for Students, AWS, etc.). The funds are split between the team members and we are not restricted to UC. Overall, we believe our solution will contribute to economic development since from our research and discussion with our advisor, there is a market for this because of how difficult data analysis is and how often the task has to be done.

For the legal constraints, our project faces minimal challenges since all data used for testing and demonstration will either be synthetically generated or obtained from publicly licensed datasets. By relying on these data sources, we avoid potential issues related to intellectual property rights, privacy violations, or data ownership disputes. This approach allows us to focus on developing and refining the AI's technical capabilities without the added concern of legal complications.

From an ethical standpoint, we are conscious of potential misuse of data or biases in the AI's decisions. To ensure fairness and neutrality, we use anonymised and publicly available datasets, maintain transparency about how the AI generates outputs, and include clear disclaimers about the tool's limitations. Our goal is to make the system helpful without replacing human judgment.