

InstaResz Business Services Pvt.Ltd (AI Assignment)

Market Research & Use Case Generation Agent

Your goal is to design a Multi-Agent architecture system that generates relevant AI and Generative AI (GenAI) use cases for a given Company or Industry. The system will conduct market research, understand the industry and product, and provide resource assets for AI/ML solutions, focusing on enhancing operations and customer experiences.

The Multi-agent architecture must have the following agents:

- **Research the Industry or the Company**
 - Use a Web browser tool and understand the industry and segment the company is working in (e.g., Automotive, Manufacturing, Finance, Retail, Healthcare, etc.).
 - Identify the company's key offerings and strategic focus areas (e.g., operations, supply chain, customer experience, etc.). A vision and product information on the industry should be fine as well.
- **Market Standards & Use Case Generation**
 - Based on the industry conducted, analyze industry trends and standards within the company's sector related to AI, ML, and automation.
 - Propose relevant use cases where the company can leverage GenAI, LLMs, and ML technologies to improve their processes, enhance customer satisfaction, and boost operational efficiency.
- **Resource Asset Collection**
 - Collect the above use cases generated and search for relevant datasets on platforms like Kaggle, HuggingFace, and GitHub.
 - Save the resource links fetched in a text or markdown file.
 - [OPTIONAL: BONUS] If applicable, propose GenAI solutions like document search, automated report generation, and AI-powered chat systems for internal or customer-facing purposes.

Final Proposal

- List down the top use cases that can be delivered to the customer, ensuring they are relevant to the company's goals and operational needs.
 - Ensure to add references through which certain use cases were suggested
 - Resource Asset links should be clickable.

Additional Resources:

- You may recommend the agents to refer to reports and insights on AI and digital transformation from industry-specific sources such as McKinsey, Deloitte, or Nexocode.

- Search for industry-specific use cases (e.g., “how is the retail industry leveraging AI and ML” or “AI applications in automotive manufacturing”).

Deliverables

- **Source code:** Submit the source code of your Multi-Agent workflow, along with any necessary scripts, configuration files, and documentation.
- **Report:** Write a report that explains your methodology, results, and conclusions. Include anything that helps illustrate your findings. **Architecture flowchart of your implementation is MUST.**
- **Demo Video:** A video showcasing the architecture flowchart and the output generated. Bonus: Deploy the application on Streamlit or Gradio or any other relevant tools.

Assignment Evaluation Criteria:

- Your agent will be evaluated based on the following parameters:
 - Depth of market research and competitor analysis.
 - Relevance and creativity of use cases generated for the customer.
 - Relevance of the Data Sets provided with Links.
 - Feasibility and practicality of implementing the proposed solutions.
 - Quality and clarity of the final proposal, including actionable insights.