

Round-2 Take-home Assignment from Ease Vertical AI, Inc.™



Your take-home assignment is to create a prototype AI/LLM technology driven solution that helps your client, a fictitious business, discover fresh and up to date information about specific companies that are most relevant to them as potential:

- i> Customers: 10 specific companies most likely to buy your client's product or service offering
- ii> Partners: 10 specific companies most likely to enable your client to deliver their product or service offering to their targeted customers

Your prototype solution should deliver following data fields for each company businesses discovered in the 2 categories above:

- i> Company Name, ii> Website URL; iii> Locations where they operate; iv> Estimated Size (Small, Medium, Large); v> Rationale for their selection on either list.

For context, your client has provided the attached documents about their fictitious company, including information about their fictitious product. Since this is a fictitious company, you will not find info about them online or in LLMs. However, you can find information about businesses that could be their potential customers and partners.

Below are a few guardrails and hints for your submission:

1. Social networks like LinkedIn do not allow sustained scraping or crawling of their site to access information about users or companies. Hence, your solution should not adopt this approach
2. Instead, your solution should explore techniques and/or data sources that encourage their users to access such content for free
3. As a hint, you could consider leveraging the ability of Search engines and LLMs to find 'look alikes' of companies provided as input via a prompt or an API
4. For Bonus Credit: Architect and employ one or more AI agents to enhance the quality of outcomes generated by your prototype
5. We'll be looking at the accuracy and repeatability of outcomes generated by your prototype

You may employ any tools or technologies available to you, at your own cost, to complete this assignment.

Ideally, your take-home submission should include:

1. The github code repo for your prototype solution, including proper code documentation
2. Well structured and documented LLM prompts, and/or Search engine Strings employed by your solution. For bonus credit, incorporate techniques like prompt tracing that would help optimize your prompts evaluate their performance
3. A UX which allows the user to specify, in natural language, the type of outcome (Customer or Partner) they want the prototype to generate, and other required inputs
4. A crisp presentation (max 10 slides or 5 min. video), highlighting following aspects of your work:
 - A. Underlying solution architecture and components (LLM, vector database, etc) and system design used for your prototype solution
 - B. The Cloud and AI/ML technology stack, Development tools (like copilots and LLM) and any other resources you have employed to build your prototype. Separately, list what else you would employ given more time and resources.

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- C. Complete list of AI/other tools and resources you have used to build your prototype
- D. Architecture and other details of any AI agent(s) employed in your solution
- E. Specific steps you have taken, or would take given more time and resources, to deploy and the prototype as a product. Address, both at the cloud/backend architecture level and the full-stack code level:
 - Client data Security, Ease of deployment, Ease of Use
 - Scalable deployment and performance
 - Use of AI agents to (further) enhance accuracy and performance
 - Inference time costs
 - Any other aspects you would consider while building and deploying the prototype as a commercially available solution

Please use free versions of tools or components you decide to employ in your prototype solution. The time and effort you decide to invest in completing this assignment is entirely at your decision, and you will not be compensated for the same. Kindly email your response to engage@easeverticalai.com by the deadline.

Thanks again for your interest in our venture!

The Hiring Team @ Ease Vertical AI!

www.easeverticalai.com