## Week 4 Progress

#### Work done:

- Did research into the usage of Double Diamond Pattern for product discovery
- Implemented first diamond into MetaGPT
  - Treated first diamond as identifying the fundamental need
  - Given an issue/topic, personas effected by the issue are generated. 5 issues are then generated from each persona (Divergence)
  - o GPT then synthesises a fundamental need from the list of all needs (Convergence)
  - Process should be easy to repeat for the rest of the diamonds
  - o Example of outputs at bottom of report

### Issues:

- Outputs from LLM are quite shallow/not very insightful/not quite grasping the task
  - o For some reason at the synthesise need stage, it insists on coming up with a product ideas rather than a need.
  - Need to look into details of prompt engineering
- Trouble finding academic resources on product discovery processes
  - Most of the resources I found are unsourced articles/blogs
  - Need to find a way of defining concrete steps that should be taken for an optimal design process

### Ideas:

- Friend offered to put me in contact with the head of product design at GU/GSA, could ask them for resources if needed, and if not could be a useful discussion anyway
- Can create a role such as "project manager" and redefine its 'think' functionality
  - For each diamond this role can evaluate if the output is 'good' or 'bad'
  - o If the output is 'bad', the role could choose to regress back to a previous diamond
  - o 'If the output is 'good', simply go to the next diamond
  - Essentially implements smart iterations into the product discovery process

## Example of first diamond:

## Topic:

"ideas for university design project"

## Personas generated:

- "David Rodriguez is a 40-year-old small business owner running a local restaurant. He is
  passionate about providing high-quality food and excellent customer service. David is
  hardworking and dedicated to his business, often working long hours to ensure everything
  runs smoothly. In his free time, he enjoys trying out new recipes and exploring different
  cuisines."
- "Emily Davis is a 30-year-old working professional in the field of marketing. She has several years of experience in digital marketing and is always looking for ways to stay updated with the latest trends and techniques. Emily is creative and enjoys coming up with unique marketing strategies to promote products and services. In her free time, she likes to attend marketing workshops and experiment with new marketing tools."

- "Michael Thompson is a 25-year-old graduate student pursuing a master's degree in business
  administration. He is interested in entrepreneurship and is always looking for innovative
  ideas to turn into successful businesses. Michael is a strategic thinker and enjoys analyzing
  market trends and consumer behavior. In his free time, he likes to read business books and
  network with industry professionals."
- "Sarah Wilson is a 65-year-old retiree who enjoys gardening and spending time with her
  grandchildren. She is interested in sustainable living and is always looking for ways to reduce
  waste and protect the environment. Sarah is active in her community and volunteers at local
  environmental organizations. In her free time, she likes to attend gardening workshops and
  share her knowledge with others."
- "Sophia Johnson is a 21-year-old undergraduate student studying computer science at a
  university. She is passionate about technology and is always looking for opportunities to
  apply her skills in real-world projects. Sophia is highly motivated and enjoys collaborating
  with others to solve complex problems. In her free time, she likes to participate in
  hackathons and attend tech conferences."

#### Issues identified:

## David Rodriguez:

- Difficulty managing and optimizing restaurant operations
- o Lack of resources for improving customer service
- Limited knowledge of marketing strategies for local businesses
- o Difficulty finding and retaining skilled staff
- Lack of support for experimenting with new recipes and cuisines
- o Limited access to business management tools
- Lack of networking opportunities with other restaurant owners

## • Emily Davis:

- Limited access to the latest marketing trends and techniques
- Difficulty coming up with unique marketing strategies
- Lack of marketing workshops and learning opportunities
- Limited experimentation with new marketing tools
- Lack of networking opportunities with industry professionals
- Difficulty staying updated with the latest digital marketing platforms
- Lack of support for creativity in marketing campaigns

## Michael Thompson:

- Lack of innovative ideas for turning into successful businesses
- o Difficulty analyzing market trends and consumer behavior
- Limited access to business books and resources
- Lack of networking opportunities with industry professionals
- Limited knowledge of entrepreneurship strategies
- o Difficulty finding mentors in the field of business administration
- Lack of support for strategic thinking and analysis

# • Sarah Wilson:

- Limited knowledge of sustainable living practices
- Difficulty finding ways to reduce waste in daily life
- Lack of resources for protecting the environment
- o Difficulty staying updated with the latest environmental initiatives
- Limited access to gardening workshops and learning opportunities

- o Lack of networking opportunities with other sustainability enthusiasts
- Difficulty finding sustainable products and services

### Sophia Johnson:

- o Difficulty finding real-world projects to apply her skills
- Limited opportunities for collaboration with others
- Lack of access to hackathons and tech conferences
- Limited resources for solving complex problems
- o Lack of mentorship in the field of computer science
- o Difficulty staying updated with the latest technology trends
- Limited networking opportunities with industry professionals

### Fundamental need synthesised:

#### Need:

 "Access to a comprehensive online platform for continuous learning and professional development"

### Reasoning:

"After analyzing the collection of needs, it is evident that there is a common theme of limited access to resources, networking opportunities, and staying updated with the latest trends in various fields. To address these issues, a fundamental need that can cater to the needs of Sophia, Michael, Emily, David, and Sarah is the availability of a comprehensive online platform for continuous learning and professional development. This platform should provide a wide range of resources, including real-world projects, collaboration opportunities, access to hackathons and tech conferences, mentorship programs, latest technology trends, business books and resources, entrepreneurship strategies, marketing trends and techniques, restaurant management tools, sustainable living practices, and networking opportunities with industry professionals and like-minded individuals. By fulfilling this need, individuals will have a centralized platform to enhance their skills, knowledge, and networks, enabling them to overcome their respective challenges and thrive in their respective fields."