Project Scope - Team 6

Project: Recipe suggestions

The aim of this project is to develop a web application that suggests recipes based on the ingredients that a user has at home, which can potentially minimize waste and hence promote sustainability. A user can input available ingredients they have at hand, the web app will then suggest recipes that can be made on those ingredients. An OpenAi API will be used to generate the recipe suggestions from the inputs. This version of the web app represents our minimal viable product. As we develop the application we plan to introduce some features like:

- Portion sizes
- Calories per portion
- Barcode scanning
- Ingrediens database
- Possibility for the AI to add one ingredient to get full recipe
- Possibility to select international kitchen, eg English, Spanish etc
- Recipe database
- DALL-E generated images of the recipe

Although we are excited about adding these features and potentially more, we have to first do an evaluation to determine if they are practical to implement.

Mockup

Plan to get there

Our initial strategy is to start by creating a simple prototype of our program. By beginning with a basic version of the software, we can quickly test and validate our ideas before delving into more complex features. Once we have a functional prototype and recipe generation is in place, we will focus on enhancing the user experience and the aesthetics of the product.

An essential step in our plan is to utilize OpenAI to generate recipes based on the available ingredients. This is a central feature of our project and will enable users to create meals based on what they have at hand, thereby promoting reduced food waste and more sustainable utilization of food resources.

Possible difficulties

- Dividing the project into decent chunks that everyone can handle in one week.
- Communicating and be "brave" enough to admit that they need help or did not manage to solve the issue.
- Merging the chunks of code that was developed during the sprint and making them work together.
- Eight people with different sleep schedules and effective hours can make it difficult to align and make working together on one issue difficult.
- To find a balance between those with experience and those with less experience of e.g. Python.

Alignment to the UN Sustainability Goals

Reducing food waste aligns with the UN's Sustainable Development Goal 12, emphasizing responsible consumption and production. Food production requires valuable resources like energy and water. When we waste food, the resources needed to produce the food have been used unnecessarily. Additionally, transporting food via fossil fuel-powered vehicles leads to carbon emissions. If we can minimize food waste, it will generate less carbon dioxide emissions.

According to the UN agency Food and Agriculture Organization, food waste contributes to nearly ten percent of global greenhouse gas emissions. In some countries, food waste can end up in landfills. The problem with this is that the decomposition process produces methane gas. According to the U.S. Environmental Protection Agency, methane traps heat more efficiently than carbon dioxide. So, food waste is a big international problem.

By efficiently using food and avoiding unnecessary waste, we can take a significant step towards combating climate change. Our project aims to help achieve the following subgoals:

12.3 "By 2030, halve per capita global food waste at the retail and consumer levels and reduce food losses along production and supply chains, including post-harvest losses". The project will meet this subgoal by helping households more efficiently use ingredients that they already have in their everyday food making.

The project will also help to reduce waste, thus also align with the following subgoal:

12.5 "By 2030, substantially reduce waste generation through prevention, reduction, recycling and reuse."