

Ashoka Horizons Achievers Program: Data Science, ML, AI

Week 1: Kitchen Data Collection: Assignment Write-up

1. Process Overview

As detailed in the assignment, I observed and recorded data every time a meal was cooked in my kitchen over 4 days. Before starting the assignment, I decided on how many spreadsheets I wanted to create and what information I wanted to record. I ultimately decided on creating 3 spreadsheets, each focusing on a different aspect of the kitchen processes.

I shadowed my mother, grandmother and our cook during the preparation and after each meal, I logged all the relevant details into my spreadsheet while the process was still fresh in my mind.

I referred to food packaging and online databases to find nutritional information, calorie details, cost of materials and more.

2. Rationale for Field Choices

My decision for the field choices was to do with their usefulness in further analysis for pattern predictions and the practicality of the collection process.

In the first spreadsheet, I considered the meal as a whole; recording the name of the dish prepared, date of preparation, preparation time, utensils and ingredients used and calories per serving. I tracked the ingredients used to map which ingredients are most commonly used in my household, which may be helpful in formulating more accurate grocery lists. I also tracked preparation time and utensils used since shortage of time and equipment is a common issue for newer chefs. Thus, this information could be worthwhile for them to understand which recipes are better suited for their needs and abilities.

For the second spreadsheet, I considered individual ingredients used in each of the meals and tracked the type of ingredient (be it dairy/meat/spice), the price of each ingredient and the storage method for the ingredient. The reason for tracking price was to allow budgeting and cost tracking, whereas storage type could be helpful in gaining insight into inventory planning and managing storage space.

Lastly, for the third spreadsheet I analyzed the nutritional info for each dish, tracking the protein, fat, fiber and carbohydrate content of each meal. I made this choice to gain greater dietary insight into the food we eat, which could prove to be helpful for a person wanting to lose weight or eat healthy.

All the fields tracked, combined, offered a good mix of culinary, economic and health-related information that could be put to good use by a variety of people.

Additionally, I chose to create 3 separate files to keep things organized, clean and easy to manage, kind of like how a relational database works. Each spreadsheet contained different types of information, but they were all linked by one common theme – the meals being prepared in my kitchen. Having a clear separation in different spreadsheets allows us to easily update information in case of changes without having to change the entire database.

3. Tech Set-up

I downloaded the Miniconda installer for macOS from the official website and ran the installer in Terminal. After successful installation, I created a new environment called 'horizons25' in Terminal using the "conda create" command. I then activated my environment using the "conda activate" command. This gave me a clean space to use Python and Jupyter tools if needed.