First Draft of Group Project Pitch/Summary

Sean Nesbit
Ty Farris
Marine Cossoul

Summary Statement

Our team will be using the Food Images (Food-101) dataset to categorize different food images. The Food-101 dataset has 101 categories of foods from apple pie, to waffles with 1000 images in each category. This project will implement a classification model to predict the category based on a food image. This concept can be applied to a few different areas, such as recipe recommendation and nutrition identification.

Specific Aims

- Work with image processing libraries
- Manipulate a complex dataset to vary training and testing
- Build an image classification model
- Determine accuracy of our classification model

Roles

Each team member will fill one administrative role and one technical role on a rotating schedule.

Administrative Roles:

- Scrum Master:
    - Leads and coordinates the meetings
    - Determines and sets goals for the meetings
    - Handles communication with Bosch plant
- Note Taker:
    - Records the meetings
    - Takes notes
    - Summarizes discussions
- Coder:
    - Controls screen share
    - Implements the code

Technical Roles:

- Data manager:
    - Splice dataset into training and testing data

    - Deals with formatting issues and loading dataset
    - Manages the image processing libraries
- Data scientist:
    - Builds classification models
    - Trains and tests the data
    - Optimizes classification
- Data analyst:
    - Determines accuracy metrics
    - Analyzes results and correlations

Timeline

Week	**Deliverable**	**Objective**
Week 1		N/A
Week 2		N/A
Week 3		Find dataset | Develop project pitch
Week 4	Project Pitch	Setup shareable Google Colab, load dataset, external libraries
Week 5		Use image processing libraries to pre-process the data
Week 6		Build classification model
Week 7	Finish Classification Model	Continue working on classification model
Week 8		Test and analyze model and determine effectiveness
Week 9	Final Presentation	Practice presentation and present findings to class

Final Deliverable

Our team will write up a report on our classification model and create a presentation. This report will include the following:

- Evaluation on our classification model
- Prove our result has a better prediction accuracy than blind guessing
- Talk about challenges and future improvements