**Project III Proposal (Draft)**

**Proposal**

**Stage -II**

* WebApp - NutrOmeter
* ML-Need to add data into the app
* ML-Recommend which food items go with a specific item
* Identify user diet deficiency
* Identify which vitamin is absorbed better with a specific nutrient.
* Identify a food that goes together for optimum nutrient absorption
* Calcium is absorbed will with vitamin D
* Provide hospitals with optimum diet for patients.
* Add a dietary restriction to the user form. Provide recommendations
* Provide Schools with optimum diet for students.
* ML 5-year prediction for meal trends
* ML-Restaurant data-make predications to provide to restaurants on what customers will want.
* Make prediction for a group of users logged in. based on sample data predictions. User for a school and add meals for their school. Select multiple schools. Have app provide recommendations to include in future meals.
* Improvements to current app:
* Include age group
* Include plotting over time
* Animated bar graph
* Slide bar-daily, weekly, monthly
* Bubble chart graph with size depending on how much of a given nutrient.

**Stage III**

* feed the world

**Project III Requirement**

**Proposal**

* Must submit a one-page proposal before starting

**Core App**

* Must use HTML
* Must use Flask or FastAPI
* Must use a sci-kit-learn model
* (May use a database)
* (May use R to select models, but final models must be in Python)

**Routes**

* Must have a home route that uses a Jinja template
* Must have a route that takes in user data and returns a prediction
* Must have a route that serves a report of how the ML model(s) was selected
* (May have routes that “collection” data from the user and send it to a database)
* (May have a route that uses Plotly or D3 for visualization in a Jinja template)
* (May have a route that accesses, filters, and serves data from the database as a JSON)
* (May have a route that dynamically filters and displays data to the UI)

**Testing**

* Use Postman with at least one request for each route

**Deployment**

* Must be deployed
* Must use Pipenv

**Repo**

* The repository must have a properly formatted a README.md
* Code must be formatted with Black and Prettier.js where appropriate
* Must have at least 5 GitHub Issues

**Presentation**

* Prepare a 7-minute presentation

**Individual**

* Every member must make at least 5 commits that are eventually merged to master
* Every member must write code that solves at least one meaningful Issue

Role assignment is recommended to accomplish specific tasks and delegate responsibilities!

**Project manager:** Pratima

**Lead Developer:** Parul

**Frontend Developer:** Randy**/**Nareman

**Backend Developer:** Hongmei**/**Pratima**/**Nareman

**Tester:** Hongmei**/**Nareman

**Possible Data Sets:**

**If we go with Healthy Food**

[**https://fdc.nal.usda.gov/**](https://fdc.nal.usda.gov/)

[**https://wwwn.cdc.gov/nchs/nhanes/Default.aspx**](https://wwwn.cdc.gov/nchs/nhanes/Default.aspx)

[**https://www.who.int/data/gho**](https://www.who.int/data/gho)

[**https://www.choosemyplate.gov/myplatekitchen/recipes?f%5B0%5D=program%3A128&f%5B1%5D=program%3A140**](https://www.choosemyplate.gov/myplatekitchen/recipes?f%5B0%5D=program%3A128&f%5B1%5D=program%3A140)