

## CprE/SE 492 WEEKLY REPORT 2

Jan 30 - Feb 10

Team 48

Allergy Prediction Using Artificial Intelligence

Client/Advisor: Ashraf Gaffar

Client Lead: Joseph Trembley

Team Lead: Noah Ross

Minute Taker: Ella Godfrey

Research Lead: Xerxes Tarman

Quality Assurance Lead: Alex Ong

---

- Weekly Summary

This week, we worked on cleaning/preprocessing the majority of our data before using it in a model. This included determining which methods of categorizing the data into numerical values while preventing bloating would work best, and applying these transformations to the data, along with filtering data that would not work with an artificial intelligence model.

- Past week accomplishments

- Joseph Trembley - preprocessing of data for models including categorization and filtering.
- Noah Ross - Learning React and Python while experimenting with the front end and model. Also experimenting with AWS services.
- Ella Godfrey - Learned about preprocessing data and continued to learn about the model.
- Xerxes Tarman - set up Python and Jupyter Notebook environment, and Researched and target encoding techniques for converting the ingredient data.
- Alex Ong - Watched full courses on ML fundamentals and understanding of different model algorithms. Setting up the Jupyter environment and learning how to preprocess data. Looking into AWS services down the road and going over tutorials.

- Pending issues

- Joseph Trembley - no pending issues for the week.
- Noah Ross - no pending issues for the week
- Ella Godfrey - no pending issues for the week
- Xerxes Tarman - no pending issues for the week
- Alex Ong - no pending issues for the week

- Individual contributions

Name	Hours this week	Hours Cumulative
Joseph Trembley	9	41
Noah Ross	7	35
Ella Godfrey	6	28
Xerxes Tarman	6	28
Alex Ong	7	32

- Plans for the upcoming week

- Joseph Trembley - complete preprocessing and determine the best model for our use case based on the shape and type of data after preprocessing is completed.
- Noah Ross - Understand and update frontend. Learn more about the model data.
- Ella Godfrey - Also update the frontend and continue to look into preprocessing
- Xerxes Tarman - Help with preprocessing and setup k-fold analysis to help compare different models.
- Alex Ong - Helping to determine the models to fit our data against. Help/Review current data pre-processing. Look into ML cloud deployment and try to understand that better.

- Summary of weekly advisor meeting

We started with the current progress we have made in our project, which is that we have been working on preprocessing the data to work with a model. Our advisor stated that we should ensure we do not save the patient data, as that could violate HIPPA, and that our model should be FDA ready when complete.

Next meeting: Try to have some tangible results to showcase, screenshots or presentation. Ideally this would be some form of our model up and running with our data. Could provide screenshots of accuracy and different attempts made. Encouraged to report all attempts at training the model.