



Akshat Goyal, Ashvin Lohiya, Shreeyan Shayan, Vineel Guntupalli

Design Inpection,

Code Inspection and

Unit Testing Log Sprint2

Design Inspection

Product	Chef.ai		
Date	March 4, 2018		
Author	Shreeyan Shayan		
Moderator	Akshat Goyal		
Inspectors	Ashvin Lohiya		
Recorder	Vineel Rao		
Defect #	Description	Severity	How Corrected
1	Google login throws error - Error: invalid_request Permission denied to generate login hint for target domain.	3 (The user could not use google login, but could always use the app as a guest)	Google does not accept addresses like "http://127.0.0.1:8888" as the redirect url in Client ID configuration. Instead the address should be an actual url or a localhost url. The problem was solved by changing the app url to http://localhost:5000
2	Generating verb - verb pair instead of verb - noun pairs. Multiple verbs occurring together in the dataset caused "off by 1" error.	2 (Incorrect results)	Changed the state transition design of the direction generating model so that it can handle multiple verbs back to back.
3	The recipe vectors had a lot of irrelevant information other than the features. This was reducing the quality of results many folds.	2 (The results were inaccurate)	Each recipe vector has to be manually looked over and the irrelevant information was removed. There was no automated way to do it as each vector was unique.

4	Once the user sorts the recipes on a page, if the user goes to next/previous page, the recipes become unsorted.	3 (The results were not in the correct order)	The appropriate flags were not being updated. They were updated properly to fix the issue.
---	---	---	--

Code Inspection

Product	Chef.ai		
Date	March 4, 2018		
Author	Ashvin Lohiya		
Recorder	Akshat Goyal		
Defect #	Description	Severity	How Corrected
1	The app was not behaving correctly due to the reason of some people using python 2.7 and others 3.6.	1 (The app would fail to run)	Everyone migrated to python 3.6 as that's the newest stable release version
2	Integer division instead of float division resulted in incorrect calculations.	2 (The results were inaccurate)	All numbers were cast to float before performing the calculation to prevent the error.
3	Method names were being incorrectly called due to case differences.	1 (The functions were not being called)	Created a common document so everyone calls the function with the correct names.

4	Different order in returning multiple items caused errors as python is not strongly type casted	1 (There were wrong things in wrong variables)	A standard was decided by everyone to prevent this error from happening again
---	---	--	---

Unit Testing Report

Automated Testing

We haven't used an automated testing technique yet. But we're still looking into unittest framework of Python to automate our tests.

The System relies on the following modules:

- Parsing
- Ingredient Clustering
- Probabilistic direction generating model
- Probabilistic ingredient generating model
- Login page
- Ingredients page
- All recipes page
- Recipe template

We already discussed about Parsing, Login Page, Ingredients Page, All recipes Page and Recipe template in our code inspection document of Sprint 1. Here, we discuss about the remaining modules and their errors. We've also included the modules which had some new functionality added to them since last Sprint.

Ingredient Clustering

The ingredient clustering model is used by both probabilistic direction generating model and probabilistic ingredient generating model. This module is responsible for clustering the ingredients in the dataset and giving them similarity scores.

Product	Chef.ai		
Module	Login Page		
Date	March 4, 2018		
Author	Akshat Goyal		
Recorder	Ashvin Lohiya		
Defect #	Description	Severity	How Corrected
1	Due to the absence of some vector values, clustering generated nan values for some similarities.	1 (crashes the program when using these values as integers)	Completely got rid of all the recipes that had missing values.

Probabilistic direction generating model

This module is responsible for finding the closest pre-existing recipe and/or creating a completely new recipe using the ingredients provided by the Ingredients page. Works together with the probabilistic ingredient generating model to find the directions of the computer-generated recipe or the pre-existing recipe itself.

Product	Chef.ai		
Module	Ingredients Page		
Date	March 4, 2018		
Author	Ashvin Lohiya		
Recorder	Akshat Goyal		

Defect #	Description	Severity	How Corrected
1	Due to strong constraints, the model was mostly ending up finding no similar matches.	2 (Incorrect results)	Constraints relaxed a little. Even if the recipe contains extra ingredients, it was being considered.
2	Using K means clustering was not giving good enough results.	2 (Inaccurate results)	Use a radio button instead of a checkbox to only allow selection of one option.

Probabilistic ingredient generating model

This module finds the ingredient subset with the highest similarity score and have a higher chance of occurring in the same recipe using the ingredient clustering module. Works in parallel to the probabilistic direction model to find the closest pre-existing/computer generated recipe.

Product	Chef.ai		
Module	All Recipe Page		
Date	March 4, 2018		
Author	Akshat Goyal		
Recorder	Ashvin Lohiya		
Defect #	Description	Severity	How Corrected
1	Was not adding the seed ingredient to the subset. The ingredient subset size was always one less than what it is supposed to be.	2 (Returning less accurate results)	Started the subset with the seed ingredient rather than an empty set.

Recipe Template

The Recipe page displays the steps of preparation of a recipe generated using machine learning models or from our pre-existing list of recipes.

Product	Chef.ai		
Module	Recipe Template		
Date	March 4, 2018		
Author	Vineel Rao		
Recorder	Shreeyan Shayan		
Defect #	Description	Severity	How Corrected
1	Image search api for the recipe page functions properly for single word keywords. However, the api functions incorrectly when the keyword contains multiple words.	2 (The expected functionality fails)	The api started returning results when a keyword containing multiple words was made into a single word keyword by replacing spaces between the words by an underscore.
2	The background color of the cooking mode page completely hides the toggle mode button making it hard for the user to switch back to the normal mode.	2 (Unable to navigate to other mode)	The problem was solved by simply changing the color of the button.