AN ONTOLOGY-BASED RESTAURANT SYSTEM

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Abstract

AN ONTOLOGY-BASED RESTAURANT SYSTEM
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for the degree of Bachelor of Science, 2023

The aim of the thesis is to ...

Declaration

No portion of the work referred to in this report has been submitted in support of an application for another degree or qualification of this or any other university or other institute of learning.

Copyright

Acknowledgements

I would like to thank...

Chapter 1

Introduction

1.1 Requirements

1.1.1 Functional Requirements

These are the requirements of the ontology:

- Each dish, split into the components and ingredients that the dish contains.
- Allergen information for each dish.
- Meals that are suitable for various diets e.g. Vegetarian dishes.
- Types of customer e.g. Vegans and those with Coelaic disease.
- Calorific content of each meal.

These are possible additions that could be made to the ontology, but are not necessary for the MVP:

- The ability to query a dish with ingredients added or removed.
- The ability to query a dish based on how a dish has been cooked, e.g. Which meals have not used a deep fryer to be made?

The requirements of the user interface for restaurant owner:

- Add and remove meals using ingredients and components list.

- Add and remove ingredients and components, in same page as above and separate.
- Add and remove customer types (dietry requirements and allergens).
- Query the ontology.
- A settings menu to have the option to hide calory information.

Some additional possible bonuses to the user interface are:

- A view for each dish, where the restaurant owner can edit the dish.
- The ability to add and remove dietary requirements as new ones become available.

Dietary Requirements to filter by:

- Vegetarian
- Vegan
- Pescetarian
- Religious diets e.g. Halal / Kosher preparation, Hindu and Sikh.

Allergies[1]:

- Peanut
- Ceoliac (gluten)
- Wheat
- Cow's milk
- Eggs
- Fish
- Shellfish
- Tree nuts
- Soybeans

1.1.2 Non-Functional Requirements

The non-functional requirements of the project are that it must:

- The UI must be intuitive, easy to use, and provide appropriate feedback when changes are made to the ontology.
- There must not be any redundant parts of the ontology, as the aim is to reduce the size of the memory

1.2 Evaluation Plan

To test the ontology system, I plan to conduct user studies, where I will ask people that I know to carry out certain tasks using the system, such as adding or removing a dish from the system, and searching for meals with certain parameters. These tasks will cover each aspect of the functional requirements of the system to completely evaluate how successfully the system meets the criteria.

It is important that the participants of the study are comfortable and give an honest review of the system. To do this, I aim to avoid putting them under any pressures. I will not place them under any time constraints to complete the tasks, and make sure that when I propose the study to them that the estimation is accurate, while also a slight overestimate. It is also important that the participant doesn't feel any pressure to falsely support the system, when it is in fact failing.

Chapter 2

Background

Chapter 3

Design & Methodology

Chapter 4

Results

Chapter 5

Evaluation

Bibliography

[1] Wesley Burks, Ricki Helm, Steve Stanley, and Gary A Bannon. Food allergens. *Current opinion in allergy and clinical immunology*, 1(3):243–248, 2001.

Appendix A

Example of operation

An appendix is just like any other chapter, except that it comes after the appendix command in the master file.