Ollscoil Teicneolaíochta an Atlantaigh

Atlantic Technological University

What To Cook

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WHAT TO COOK

Introduction

What To Cook is your own personal pocket-sized cookbook. The goal of this project is to create a simple and convenient way for users to cook a wide range of nutritious meals based on food they have.

As someone who lives away from home for college, I struggle to find any variety in my meals. Lack of time, funds and lack of motivation result in a similar meal nearly every day. This led to the idea of this project.

I utilised Python Scrapy to scrape data and find a range of recipes from BBC Good Foods website. These recipes were then stored in MongoDB.

The front end is built using Next.js, which ensures a meaningful user experience, while being responsive on all devices. There are multiple ways for the user to input their ingredients. They can type them in, upload files, or use the device's camera to take a picture. The application then suggests recipes that they can use, based on their available ingredients.

Welcome to What To Cook, where culinary inspiration meets technological innovation.

Aims & Objectives

The aim of the app is to help to reduce food waste. What To Cook ensures that the user is using all their food. It is estimated in Ireland, that we waste 800,000 tonnes of food each year.
What To Cook will also help the user make mealtime both quicker and more convenient. As well as more cost effective as less food is being wasted.

Technologies

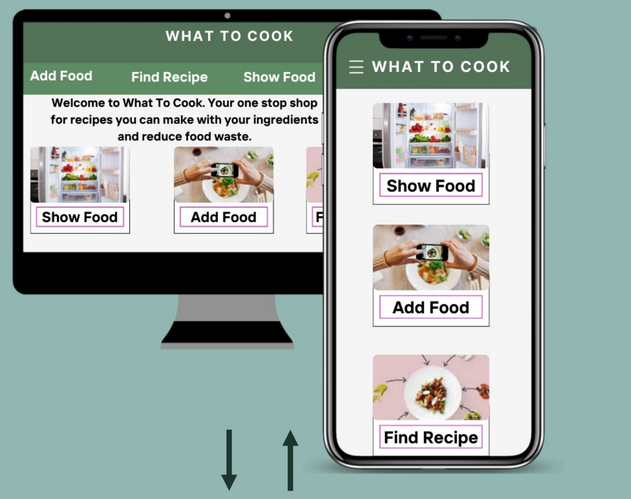
spring boot

NEXT.JS

MongoDB.

Scrapy

docker



Features

Signup / Sign-in.
Personalised recipes.
Users can save their favorite recipes.
Users can add food to the application.
Food image recognition.
Users can view what foods they've added to the application.

Overview

The Next.js frontend features a responsive layout designed using CSS and Flexbox. Next.js integrates the Clarifai API food-item-recognition AI model for food recognition, providing a convenient way for users to add their ingredients to the application.

This project uses Spring Boot microservices for scalability, breaking the application into smaller, independent services, and improving performance.

The authentication service ensures only authorized users can access sensitive data and protected routes. It allows user registration, and sign-in, enabling users to create accounts, add their own personal foods and save their favorite recipes. On sign-in a JSON Web Token (JWT) is stored in a HTTP Only cookie to identify an authenticated user.

This project uses Python web-scraper framework Scrapy, to gather recipes from the BBC Good Food website. The data is stored in a MongoDB Atlas database.

Mongo Atlas was chosen for its search index feature, as it allowed the implementation of a search index on each recipes ingredients in the database. This categorizes data in an easily searchable format. It is a mapping between available ingredients and the recipes that contain those ingredients.

Results

Project Engineering
BEng (Hons) Electronic and Software Engineering