

Team 'Les Misérables'

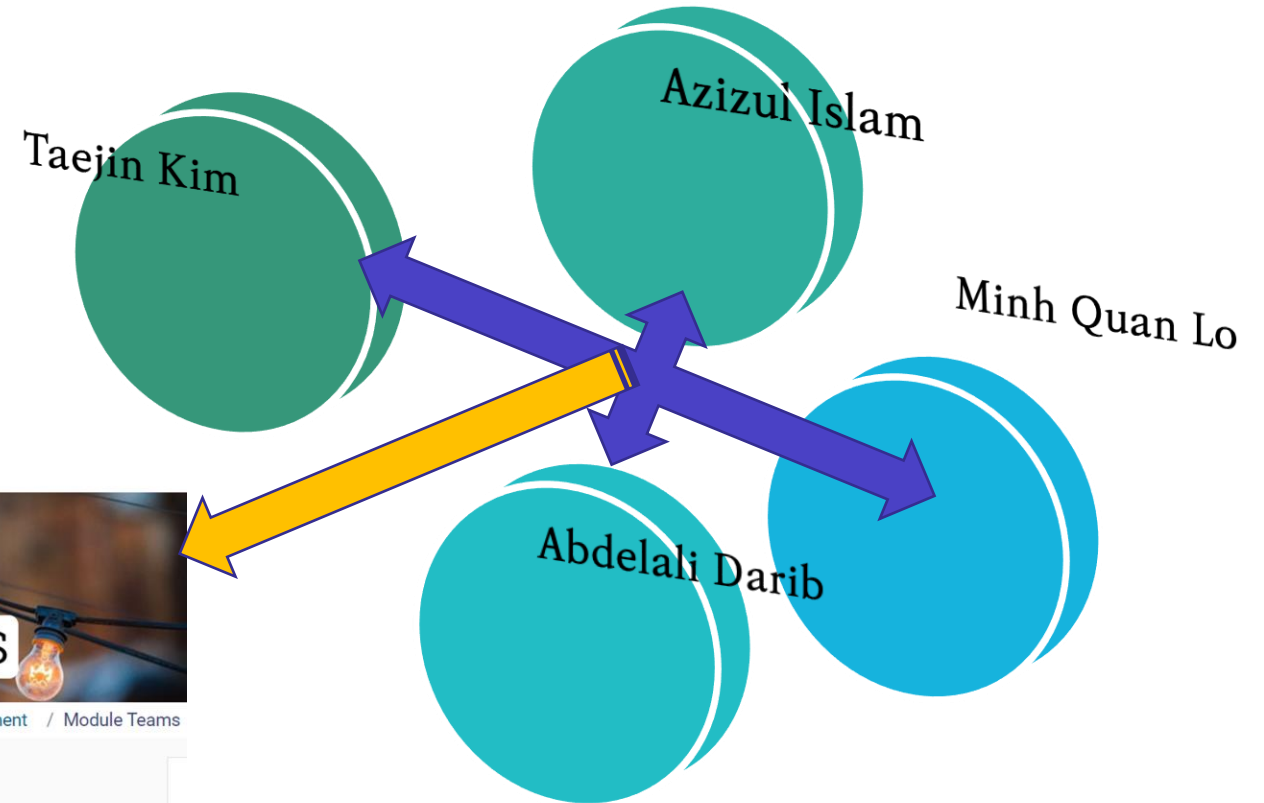
27th April 2023



Data
Engineering

CMP020X304S

Team



University of Roehampton Moodle

My Modules ▾ This Module ▾

2022.23 Data Engineering CMP020X304S

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Module Teams

Please add your team setups here.

Group ▴ ▾	Group description ▴ ▾	Count ▴ ▾	Members ▴ ▾
Les Misérables	Click to edit	4/4	Member list not available

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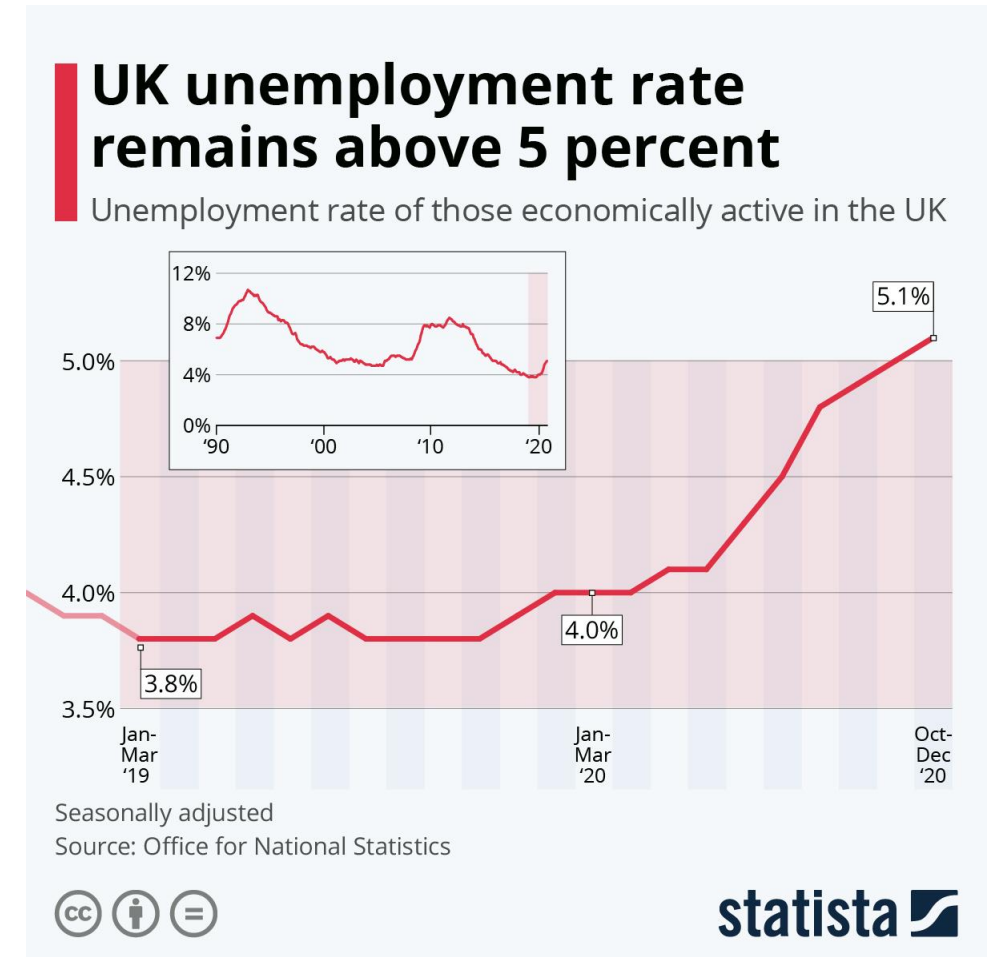
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Introduction

- This project 'Les Miserables' team was carried out as a scrum team project as a way to produce quick results, and is ultimately an attempt to develop a website application related to global unemployment rate information due to Covid-19.
- We design and implement a new interface system for easy access to unemployment rate information.
- The purpose of this project is to design and implement an interface system that provides easy access to global unemployment rate information



Literature & Technology Review



- We will look at recent studies related to the construction and development of unemployment information web systems.
- While this study, especially regarding the Covid-19 impact, is about system construction.
- Here we will look at the latest research related to the unemployment rate information web system.



Literature Review



- The objective of this section is to explore the recent unemployment rate in light of the COVID-19 pandemic, which has resulted in economic difficulties worldwide. To accomplish this, we conducted a search on Google Scholar using "COVID-19 unemployment rate" as the search term.
- The latest research shows empirical evidence that Covid-19 has had a high impact on unemployment.
- It shows the need for service provision to provide recent trends in unemployment rates so that relevant analyses can be made. Through this, we are sure that building this system is a meaningful approach.

Technology Review



- In this technical review, the process of theoretical literature review described above was followed, and keywords were searched in Google Scholar by entering 'Unemployment rate information system' in Google Scholar.
- It shows that a system that makes unemployment rate information more accessible is necessary to be made by OpenAI. So, the technical studies related to OpenAI system development share a common feature - they prioritize designing the systems that cater to the user's requirements.
- Therefore, this project also acknowledges the importance of user requirements and prioritizes designing user-centered systems


Design or Methodology

- This project was originally designed to build information-providing systems. However, it is presented accordingly as an application of the OpenAI system to reflect the latest technological trends and changes in user needs.

- So, this approach was changed into a project change form through discussions with project group members according to the guide of 'PMBOK (Project Management Body of Knowledge)'

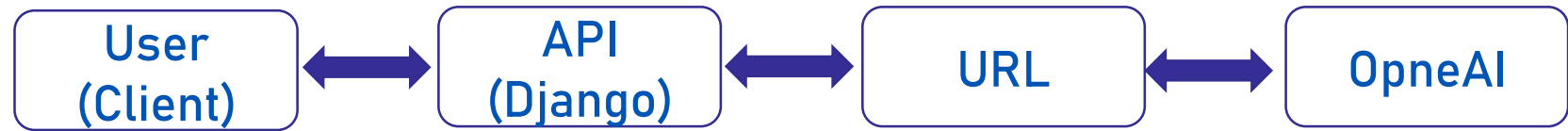
Change Request of project

Table A-3. Change Request form

Project Details:	
Project Name: LesMiserables	
Request #: 1	Date of Request: 16 th March 2023
Requested By: Taejin Kim	
Request Description:	
<p>The original plan was to utilize Nodejs as a backend device as a server. However, in view of the recent research trend, group members agreed that the use of OpenAI is necessary. Therefore, a change was requested through the process shown in the following figure.</p>	
	

Design or Methodology

Therefore, a change was requested through the process shown in the following figure.



This
project



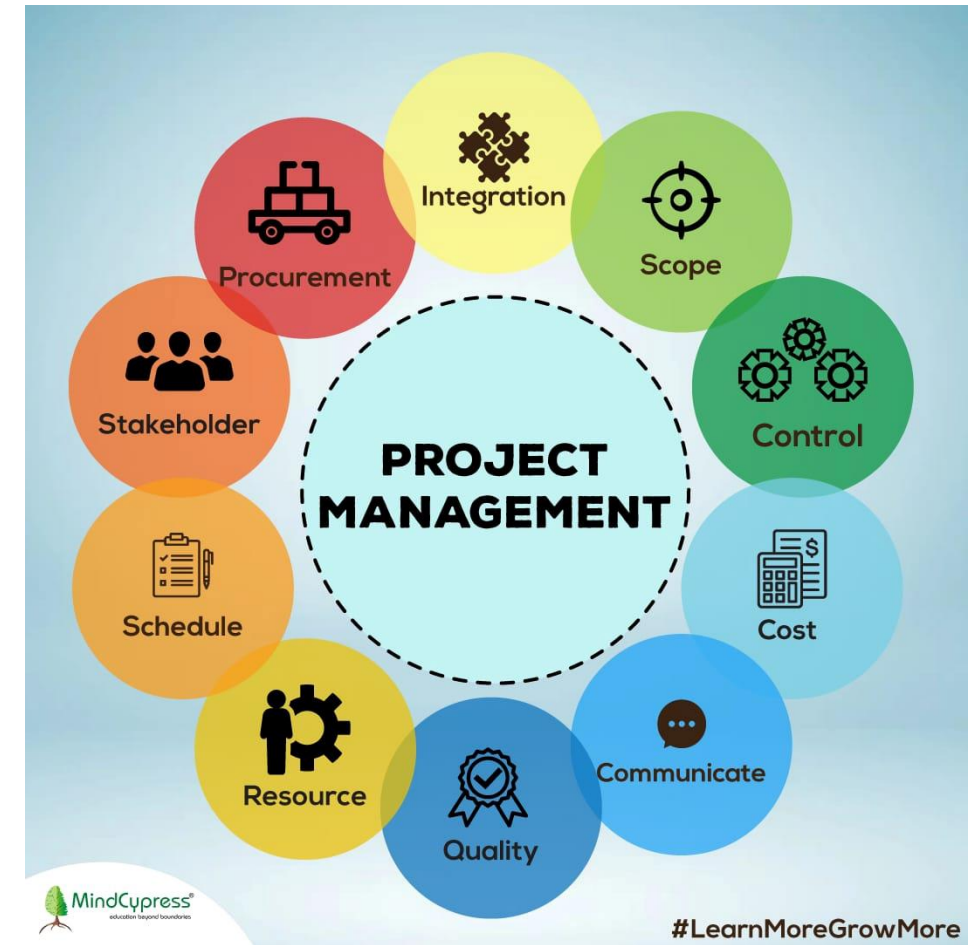
presents the results of work performed on the project. It contains minimal code as a gist and outlines how the design for the implementation actually came together. This project was implemented using Django as API for the backend and for the frontend. That is, the backend also makes a connection to OpenAI and sends a request to the frontend.

Design or Methodology

Therefore, the system process of this project included:

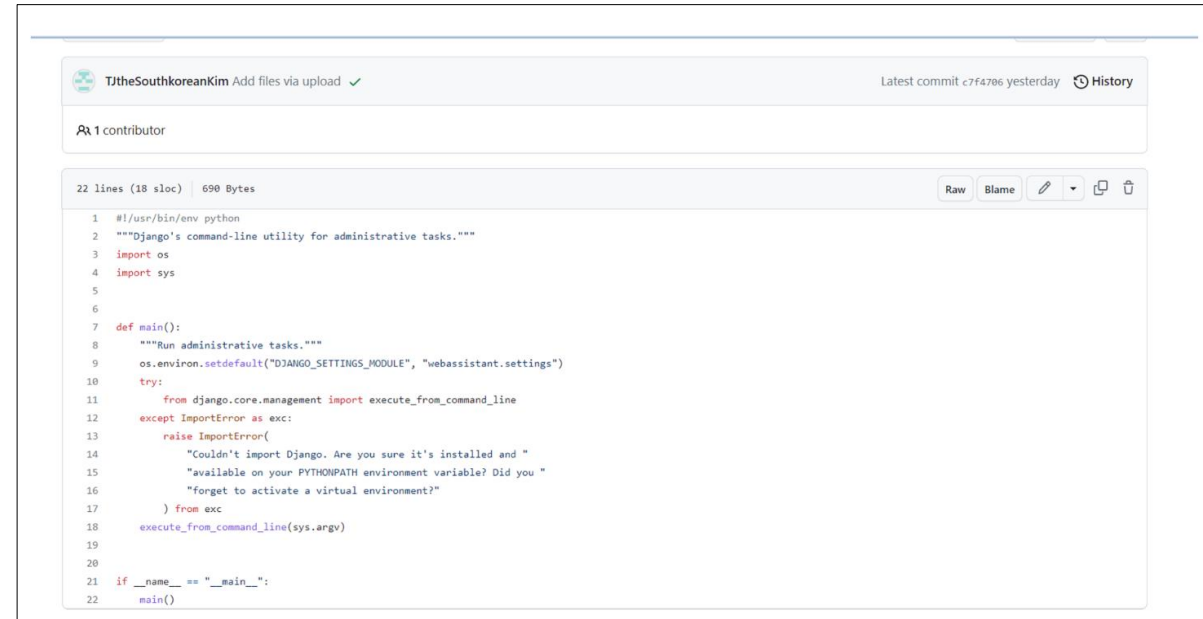
- ☐ Identification of requirements
- ☐ Task assignment
- ☐ Identify project scope
- ☐ Stakeholder identification
- ☐ Risk management

This approach allows for faster development cycles and easier project management.



Implementation or Results

- This project was implemented using Django as API for the backend and for the frontend. That is, the backend also makes a connection to OpenAI and sends a request to the frontend. A part of the code related to this is presented as the following figure

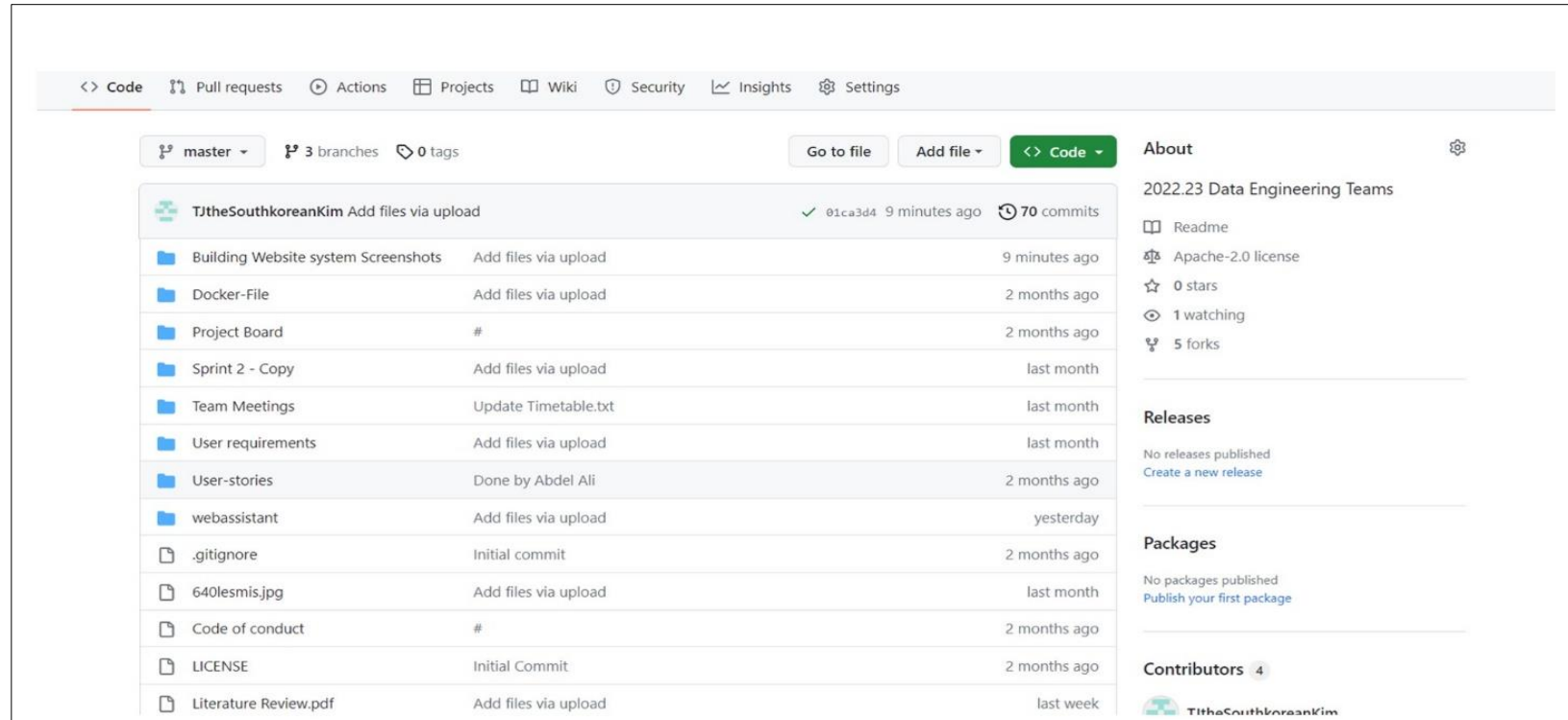
A screenshot of a GitHub repository page for the user 'TJtheSouthkoreanKim'. The repository is named 'Les-Mis-rables' and the file shown is 'webassistant/manage.py'. The code is a Python script for Django's command-line utility. It includes a docstring, imports for 'os' and 'sys', and a 'main()' function that uses 'execute_from_command_line' from 'django.core.management'. The code is 22 lines long, with 18 lines of code and 690 bytes. The latest commit is 'c7f4786' from yesterday.

```
1 #!/usr/bin/env python
2 """Django's command-line utility for administrative tasks."""
3 import os
4 import sys
5
6
7 def main():
8     """Run administrative tasks."""
9     os.environ.setdefault("DJANGO_SETTINGS_MODULE", "webassistant.settings")
10    try:
11        from django.core.management import execute_from_command_line
12    except ImportError as exc:
13        raise ImportError(
14            "Couldn't import Django. Are you sure it's installed and "
15            "available on your PYTHONPATH environment variable? Did you "
16            "forget to activate a virtual environment?"
17        ) from exc
18    execute_from_command_line(sys.argv)
19
20
21 if __name__ == "__main__":
22     main()
```

Code screenshot from <https://github.com/TJtheSouthkoreanKim/Les-Mis-rables/blob/master/webassistant/manage.py>

Implementation or Results

- The following shows the github website with contents related to the development process.



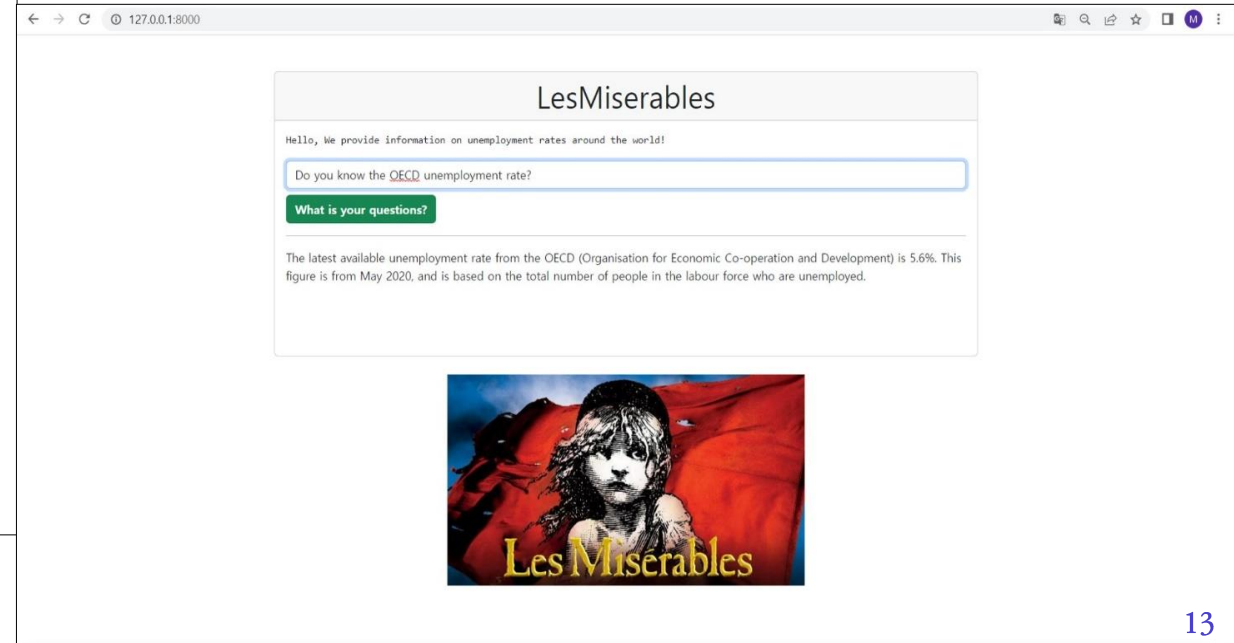
(Source:

<https://github.com/TJtheSouthkoreanKim/Les-Mis-rables>

Implementation or Results

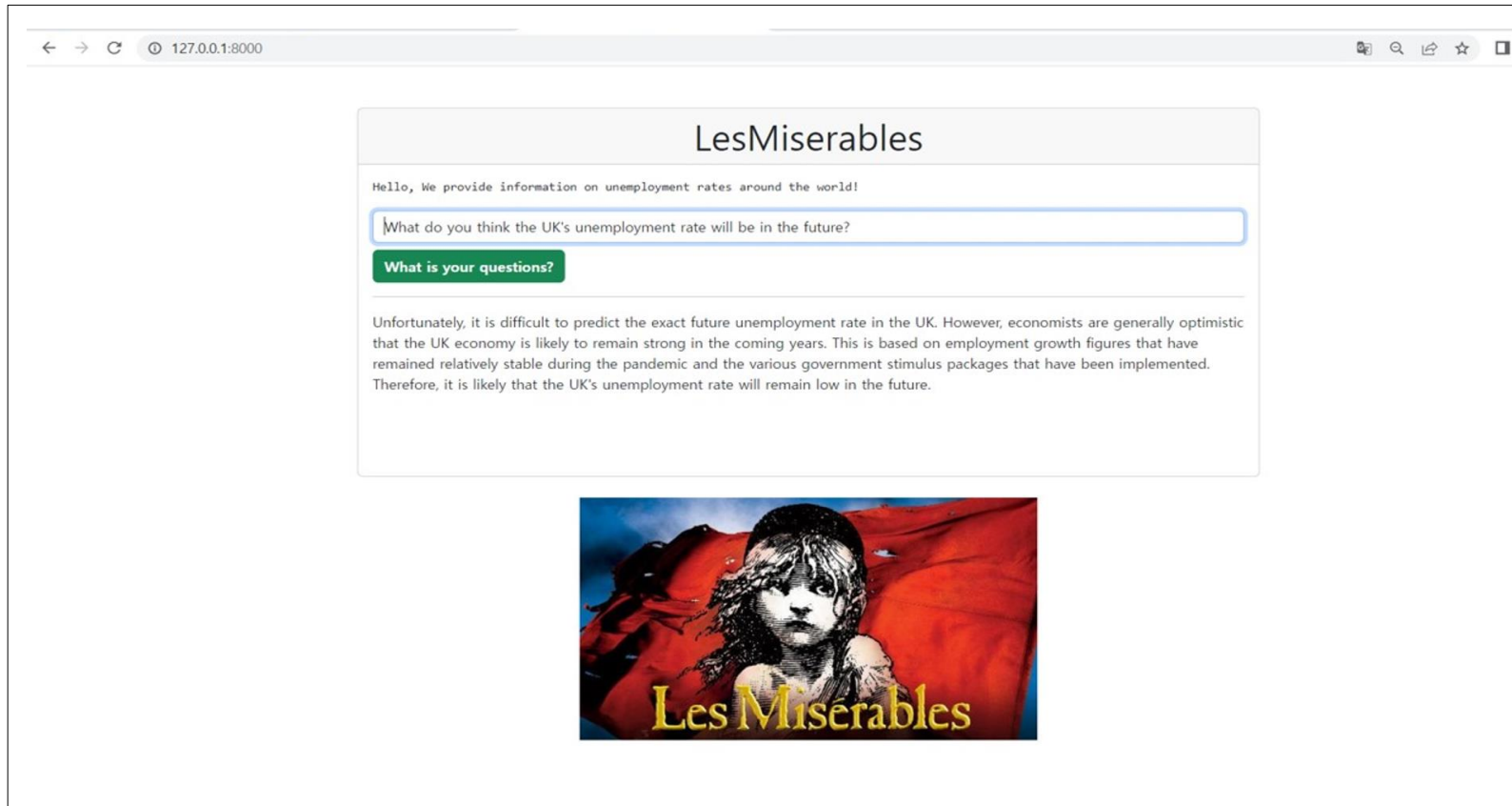
- When asked whether Covid-19 has affected the unemployment rate in the presented system, the unemployment rate is shown as a percentage result.

If users ask the question about the unemployment rate on OECD website, you will get the result as shown in the following figure.



Implementation or Results

- It also presents results when asked about future projections of UK unemployment rates, and expects somewhat positive results.



Implementation or Results – system evaluation

- Here, the index provided by the Project Management Institute (PMI) was modified for reference and used as an evaluation table.

The project members' evaluations determine the items and ratings in this section, which assess the project's progress. Later, detailed reflections are presented based on these evaluations.

The project received a score of 3.875 out of 5, suggesting that there is room to increase the potential for application in other industries.

Table 1. Performance index

Performance object	Performance measuring index	Measurement (5point basis)
System convenience	Convenience which users of system feel	5
	Satisfaction depending on convenience	
Advancement of industry	Effect for corresponding industry	2.5
	Degree of advancement for corresponding industry	
	Possibility to respond for other industry	
	Effect for international standardization	
Increase of efficiency and improvement of productivity	Proper planning	4
	Innovation of quality control	
	Establish standard data of enterprise	
Accumulation of technology	Degree of technical accumulation	4
	Degree of construction ability and knowhow	
	Interworking with other systems	
Total		3.875

Conclusions

- This project highlights the importance of designing user-centered AI systems that cater to user requirements and emphasises the need for a system that makes unemployment rate information more accessible and user-friendly.
- The score in the Lessons Learned section was used as an indicator of high motivation among project members and can be used to provide incentives.
- If the next project starts, internal problems will be resolved through regular discussions or meetings for efficient integrated project management. In particular, it is necessary to carry out the project more efficiently through communication between team members and division of work.

REFERENCES

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- ✓ <https://github.com/x4nth055/pythoncode-tutorials/tree/master/web-programming/webassistant>
- ✓ How to Build a Web Assistant Using Django and ChatGPT API in Python. Available for: <https://www.thepythoncode.com/article/web-assistant-django-with-gpt3-api-python>
- ✓ 'Les Misérables' Project. Available for: <https://github.com/TJtheSouthkoreanKim/Les-Mis-rables>



Team 'Les Misérables'

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Thank you for watching our
presentation!