News Article Sorting

Low Level Design Document

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DOCUMENT VERSION CONTROL

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12-01-2023	1.0	LLD Document	Pauline IC
16-01-2023	2.0	LLD Document	Pauline IC

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1. Introduction

1.1 What is Low-Level design document?

A Low-Level Design Document (LLDD) is a technical document that provides a detailed description of how a software system, system component, or feature will be implemented. It typically includes information on the system's architecture, data structures, algorithms, interfaces, and dependencies. The purpose of the LLDD is to provide a clear and complete understanding of the software system being designed, and to serve as a guide for the implementation and testing of the system.

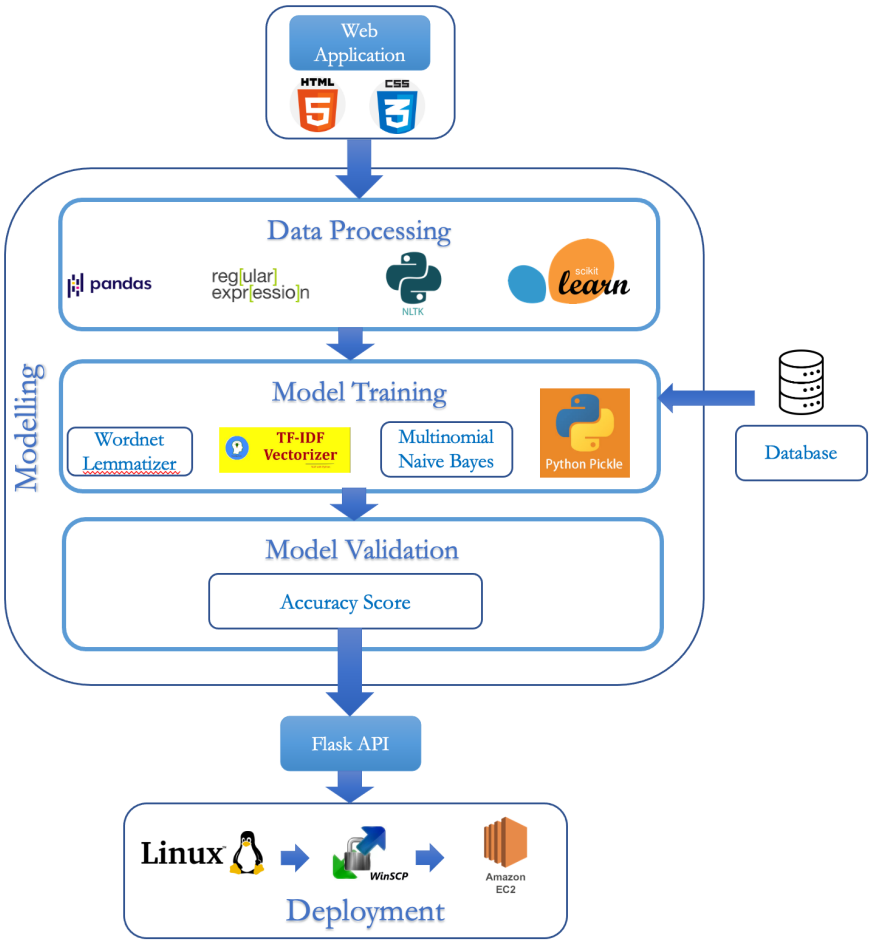
1.2 Purpose and scope of the document

Low-level design (LLD) is a component-level design process that follows a stepby-step refinement process. The process can be used for designing data structures, required software architecture, source code and ultimately, performance algorithms. Overall, the data organization may be defined during requirement analysis and then refined during data design work.

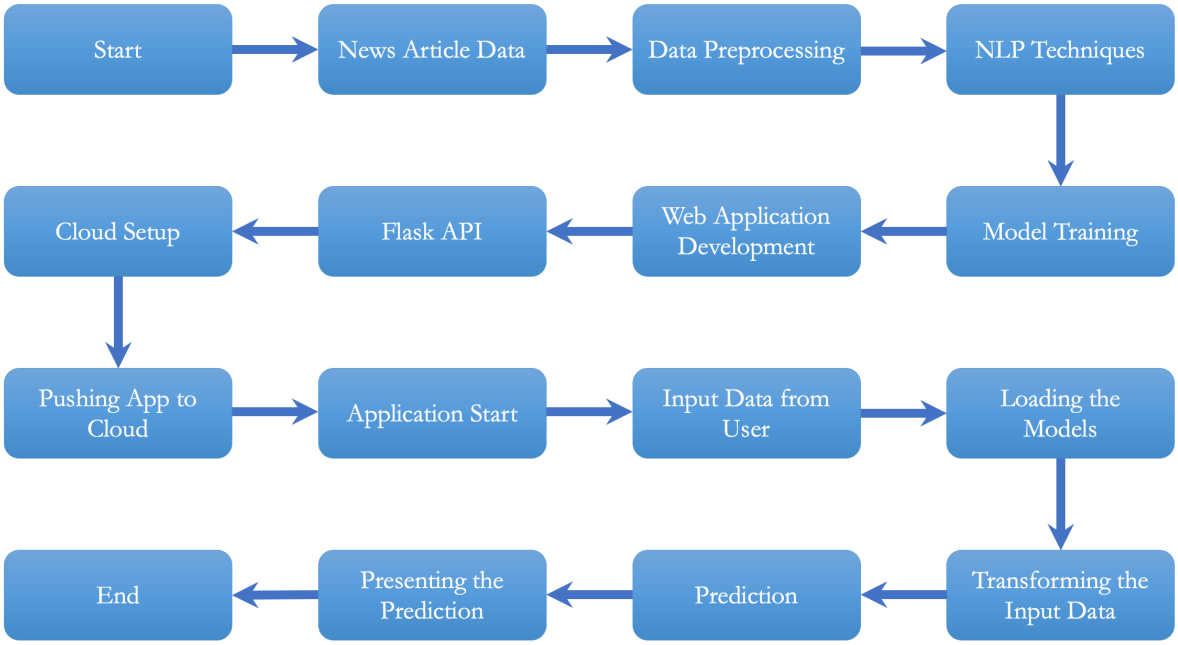
2. System requirements

- Windows 7 and above
- CSS
- SQL
- Putty
- PyCharm
- WinSCP
- HTML
- AWS Account

3. System Architecture



4. Detailed Design



5. Dependencies

pandas

reg[ular] expr[essio]n

NLTK

scikit learn

6. Interfaces

- Input and output news articles are of text format SSH (Secure Shell) pro
- SSH (Secure Shell) protocol is used to transfer text messages
- Syntax error and logical errors are taken into consideration

7. Error Handling

The model handled getting inputs, grammatical errors, vector conversion errors, pickle loading, and data transformations with separate exception handlers.

8. Performance

Expected response times

- The system logged every event so that the user knows which process is running internally.
- The system identifies at which step logging required.
- The system logged each and every system flow

9. Resource usage

When a task is performed, it used all the processing power available until its work done.

10. Implementation

- Python SQL
- nltk
- Html
- Linux
- Pandas
- sklearn
- css
- Windows, AWS EC2.
- Regular Expression
- pickle
- flask

11. Test and Evaluation

Test cases

Unit Test Cases:

Test case Description	Prerequisites	Expected Result
Verify whether the Application URL is accessible to the user	1. Application URL should be defined	Application URL should be accessible to the user
Verify whether the Application loads completely for the user when the URL is accessed	1. Application URL is accessible 2. Application is deployed	The Application should load completely for the user when the URL is accessed
Verify whether user can see input fields on logging in	1. Application is accessible 2. User is signed up to the application 3. User is logged in to the application	User should be able to see input fields on logging in
Verify whether user can edit the input field	1. Application is accessible 2. User is signed up to the application 3. User is logged in to the application	User should be able to edit all input fields
Verify whether user gets Submit button to submit the inputs	1. Application is accessible 2. User is signed up to the application 3. User is logged in to the application	User should be presented with recommended results on clicking submit
Verify whether the classified results are in accordance with the input user made	1. Application is accessible 2. User is signed up to the application 3. User is logged in to the application	The classified result should be in accordance with the selections user made

12. Conclusion

The document included a thorough description of the News Article Sorting Project. News Article Sorting will classify every news article to different categories. This is done based on the learning made by the model. The model is trained with thousands of news articles with their classification to do better prediction. The model could classify any news article with 97% accuracy. Anyone can utilise the model because it has been installed in an AWS EC2 instance.