Informatics Institute of Technology

In Collaboration With

University of Westminster, UK



*University of Westminster, Coat of Arms*

Generalized Abstractive Text Summarization Using Optimized Transformers

Software Requirements Specification (SRS)

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This Project Proposal is submitted in partial fulfilment of the requirements for

the BSc (Hons) Computer Science degree at

the University of Westminster.

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**Acronyms**

|  |  |
| --- | --- |
| AI | Artificial Intelligence. |
| DL | Deep Learning |
| ML | Machine Learning |
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# CHAPTER OVERVIEW

# RICH PICTURE

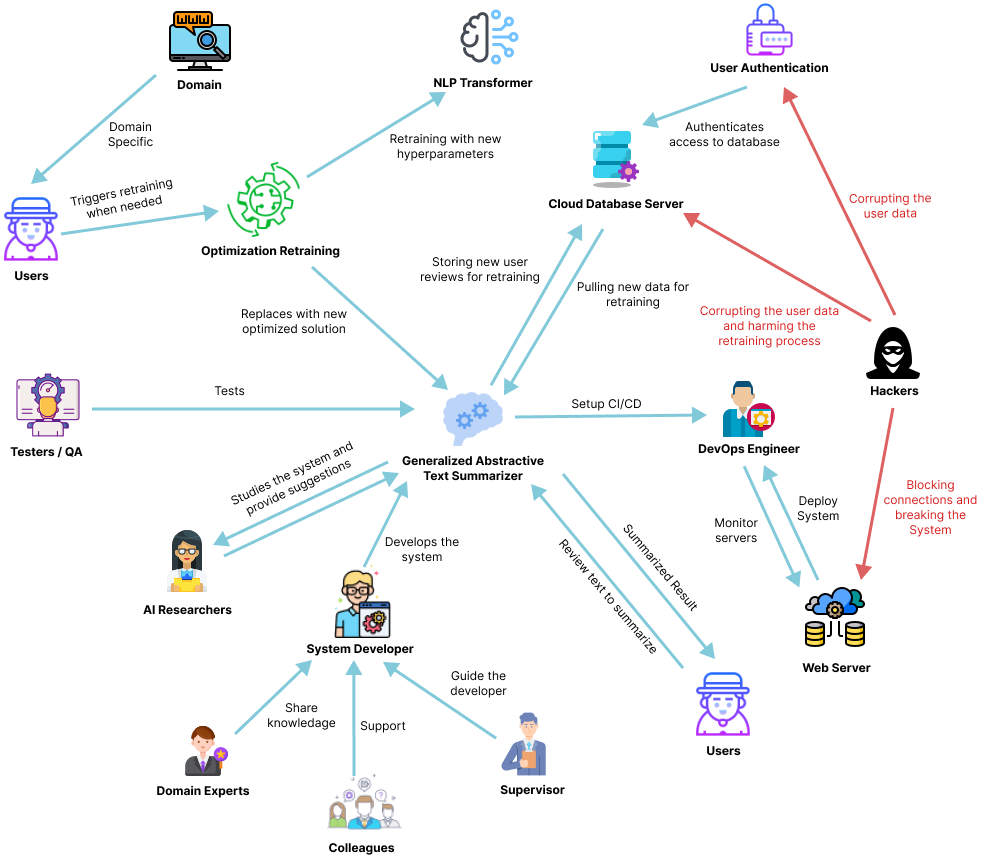
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Figure 2.1 – Rich Picture Diagram (*self-composed*)

# STAKEHOLDER ANALYSIS

## 3.1 Stakeholder Onion Model

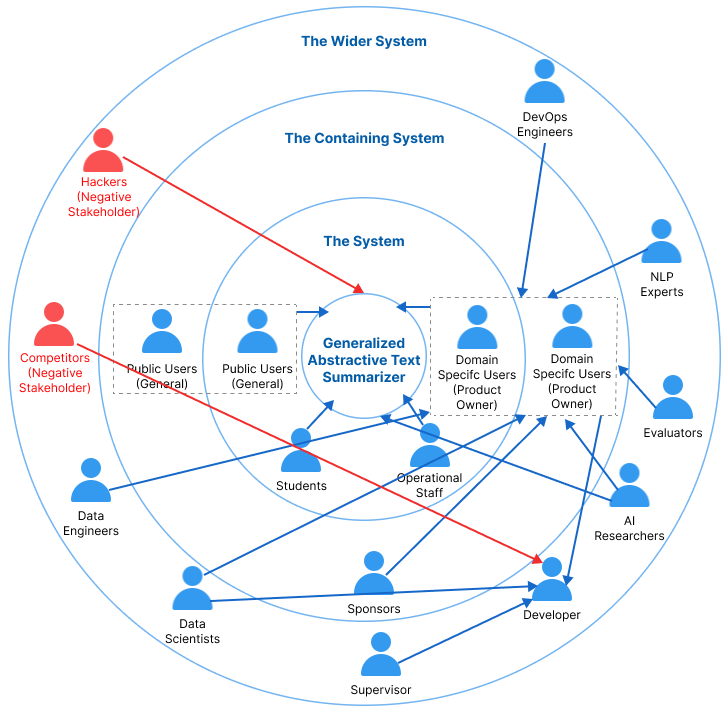


Figure 3.1 – Stakeholder Onion Model (*self-composed*)

## 3.2 Stakeholder Viewpoints

|  |  |  |
| --- | --- | --- |
| **Stakeholder** | **Role** | **Benefits/ Role Description** |
| Developer | Financial Contributor | Works on developing the system |
| Sponsors | Funds to market the system and allows developers to advance the system with time. |
| Data Scientists | Quality Control Regulator | Provides performance enhancements for the models and algorithms used in data science. |
| Data Engineers | Gives guidance on potential data that may be used to generate the best suggestions possible. |
| AI Researchers | Conduct research in the specified area to enhance and implement reliable text summarizing models. |
| NLP Experts | Offers specialized guidance and insights on the field  knowledge, to enhance the functionality of the system. |
| Students | Functional beneficiary | Understanding how the generalization works along with hyperparameter retraining with respect to the domain. |
| Domain Specific Users | System Owner and Operational | Inputs the text reviews for abstractive summarization and handles the need for model retraining when need to improve performance with the previously used inputs as new data for the model. |
| Public Users | General Usage | General public users (Not Domain Specific) will be using the general abstractive summarization model without any specific model assigned to them and hyperparameter retraining unless they want to. |
| Operational Staff | Operations support | Ensures that the system is up and functioning while responding to user requests and problems. |
| DevOps Engineers | Product Deployment & Maintenance | Makes ensuring the system is up and running in the cloud and is serving users without being throttled |
| Hackers | Negative Stakeholder | May manipulate the review data stored in the database which will affect the retraining process. |
| Competitors | May build competing systems that may outperform the existing system. |
| Evaluators | Quality Inspector | Checks to see if the system is ready for production use and puts it through its paces. |

# REQUIREMENT ELICITION METHODOLOGIES

# ANALYSIS OF DATA & PRESENTATION OF THE OUTCOME THROUGH ELICITATION METHODOLOGIES

## 5.1 Literature Review

## 5.2 Survey

## 5.3 Prototyping

# SUMMARY OF FINDINGS

# CONTEXT DIAGRAM

# USE CASE DIAGRAM

# USE CASE DESCRIPTIONS

# REQUIREMENTS

## 10.1 Functional Requirements

## 10.2 Non-functional Requirements

# CHAPTER SUMMARY

# REFERENCES

# APPENDIX A – CONCEPT MAP