Informatics Institute of Technology

In Collaboration With

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*University of Westminster, Coat of Arms*

GenSum

Conclusion

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**Acronyms**

|  |  |
| --- | --- |
| AI | Artificial Intelligence. |
| DL | Deep Learning |
| GUI | Graphical User Interface |
| ML | Machine Learning |
| NLP | Natural Language Processing |
| ROUGE | Recall-Oriented Understudy for Gisting Evaluation. |
| BLEU | BiLingual Evaluation Understudy. |
| T5 | Text to Transfer Transformer. |
| BART | Bidirectional Auto-Regressive Transformers. |
| BERT | Bidirectional Encoder Representations from Transformers. |
| PEGASUS | Pre-training with Extracted Gap-sentences for Abstractive Summarization Sequence-to-sequence |
| ILP | Inductive logic programming. |
| LSTM | Long Short-Term Memory. |
| RNN | Recurrent Neural Network. |
| CNN  SEQ2SEQ | Convolutional Neural Network.  Sequence to Sequence |
| RoBERTa | Robustly Optimized BERT Pre-training Approach |
| GPT-3  REST  GPU | Third Generation Generative Pre-Trained Transformer  Representational State Transfer  Graphical Processing Unit |

# Chapter Overview

This chapter covers the preliminary conclusion of the research project, including the core functionality of its implementation for the MVP. The chapter will also review the achievements of the project's goals and objectives and the obstacles encountered. Additionally, an outline of the author's prior knowledge and modules of the program which helped to support the project will be documented along with any new knowledge and skills acquired.

# 10.2 Achievement of Research Aim & Objectives

## **10.2.1 Achievement of Aims**

**“***The aim of this research is to design, develop and evaluate an optimal generalized transformer architecture from a range of popularly used architectures by fine-tuning via hyperparameter optimization, therefore obtaining the recommended architecture's optimum performance.***”**

The initial core components related to the aim of the research is successfully completed by designing, developing & evaluating a performance adaptive generalized transformer. The core functionality was researched in a way to be automated in order to meet the project requirements. The evaluations for the respective work done is attached in the implementation chapter.

## **10.2.2 Achievement of Objectives**

Appendix G – contains the achievement status related to the research objectives which were mentioned in the Chapter 01. "Completed" is the mark next to tasks that were successfully completed, while "Incomplete" is the mark next to those that weren't.

# 10.3 Utilization of Knowledge from the Course

Table 10.1: Utilization of Knowledge gained from the course

|  |  |
| --- | --- |
| **Module(s)** | **Utilized Knowledge** |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |

# 10.4 Use of Existing Skills

# 10.5 Use of New Skills

# 10.6 Achievement of Learning Outcomes (LOs)

# 10.7 Problems and Challenges Faced

Table 10.2: Mitigations to Problems and Challenges Faced

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