AI Usage Card for Deep Learning for Natural Language Processing: Practical Project

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PROJECT NAME
Deep Learning for Natural Language Processing: Practical Project

KEY APPLICATION(S)
Natural Language Processing, Deep Learning, Sentiment Analysis, Paraphrase Detection, Semantic Similarity, Paraphrase Generation, BERT, BART

MODEL(S)
GPT4o, Sonnet 3.5

DATE(S) USED
2024-07-01

VERSION(S)
ChatGPT, Claude Chat

IDEATION
GPT4o, Sonnet 3.5

GENERATING IDEAS, OUTLINES, AND WORKFLOWS
Not used

IMPROVING EXISTING IDEAS
Not used

FINDING GAPS OR COMPARE ASPECTS OF IDEAS
Thinking of pitfalls in experimentation

LITERATURE REVIEW
GPT4o, Sonnet 3.5

FINDING LITERATURE
Not used

FINDING EXAMPLES FROM KNOWN LITERATURE
Not used

ADDING ADDITIONAL LITERATURE FOR EXISTING STATEMENTS AND FACTS
Not used

COMPARING LITERATURE
Understanding complex ideas and mathematical expression in scientific papers, and contrasting them with others

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METHODOLOGY

PROPOSING NEW SOLUTIONS TO PROBLEMS
Not used

FINDING ITERATIVE OPTIMIZATIONS
Not used

COMPARING RELATED SOLUTIONS
Not used

EXPERIMENTS GPT4o, Sonnet 3.5	DESIGNING NEW EXPERIMENTS Not used	EDITING EXISTING EXPERIMENTS Setting up workflow for grid search for hyperparameter optimization. Data analysis of experiments results
	FINDING, COMPARING, AND AGGREGATING RESULTS Not used	
WRITING GPT4o, Sonnet 3.5	GENERATING NEW TEXT BASED ON INSTRUCTIONS Not used	ASSISTING IN IMPROVING OWN CONTENT Phrasing of ideas and documentation in README. Reviewing documentation and proposing improvements in README.
	PARAPHRASING RELATED WORK Summarize BERT Hugging Face documentation by explaining how BERT is built. Assist in understanding project description and constraints	PUTTING OTHER WORKS IN PERSPECTIVE Not used
PRESENTATION	GENERATING NEW ARTIFACTS Not used	IMPROVING THE AESTHETICS OF ARTIFACTS Not used
	FINDING RELATIONS BETWEEN OWN OR RELATED ARTIFACTS Not used	
CODING GPT4o, Sonnet 3.5	GENERATING NEW CODE BASED ON DESCRIPTIONS OR EXISTING CODE Generate unit test scripts, as sanity check test the model implementation. Implemented the loss function for fine-tuning on the STS dataset. Assistance in writing code for hyperparameter grid search. Assistance in Jupyter Notebook for experiments results data analysis.	REFACTORING AND OPTIMIZING EXISTING CODE Adding docstring and type hints at several parts of the code. Looking for bugs in newly implemented code for improvements. Improve code readability.
	COMPARING ASPECTS OF EXISTING CODE Explain certain parts of code syntax in provided scripts.	
DATA	SUGGESTING NEW SOURCES FOR DATA COLLECTION Not used	CLEANING, NORMALIZING, OR STANDARDIZING DATA Not used

FINDING RELATIONS BETWEEN DATA AND COLLECTION METHODS
Not used

ETHICS
GPT4o, Sonnet 3.5

WHAT ARE THE IMPLICATIONS OF USING AI FOR THIS PROJECT?
Facilitate readability and implementation of deep learning models for NLP tasks

WHAT STEPS ARE WE TAKING TO MITIGATE ERRORS OF AI FOR THIS PROJECT?
Contrast everything with own knowledge on theory and coding practices

WHAT STEPS ARE WE TAKING TO MINIMIZE THE CHANCE OF HARM OR INAPPROPRIATE USE OF AI FOR THIS PROJECT?
Thorough revision on accuracy and correctness of assistance provided by AI

THE CORRESPONDING AUTHORS VERIFY AND AGREE WITH THE MODIFICATIONS OR GENERATIONS OF THEIR USED AI-GENERATED CONTENT
Yes