Empathetic Response Generation through Multi-task Learning

Problem Statement:
The stark difference between these responses highlights a critical gap in current AI technology. While modern chatbots excel at processing information and generating grammatically correct responses, they often fail to capture the emotional essence of human communication. They miss the excitement, the shared joy, and the natural flow of emotional conversation that makes human interactions meaningful. Currently, there are some language models like Chat GPT >3.5, Llama >v2, Claude >2 etc.. will respond in empathetic manner while specifically prompted but, we are intended to develop a fully focussed empathetic response generation chat application.

Our Solution:
Our Solution: EMPML (Empathetic Response Generation through Multi-task Learning) aims to bridge this gap by creating a more emotionally intelligent chat application. Through an innovative multi-task learning approach, our model will simultaneously learn to detect emotions, understand their causes, and generate appropriate empathetic responses. We believe that by training a single language model to handle these interconnected tasks, we can create more natural and emotionally aware conversations.

Implementation:
Implementation Approach: - Multi-task Learning: Single LLM for both emotion detection and response generation - Parameter-Efficient Fine-tuning: Using LoRA for optimal resource usage - Dataset: EmpatheticDialogues (20k high-quality emotional conversations
For the front end we gona use stemlit.