**PROJECT DESCRIPTION**

Our team is developing an innovative AI-based system for analyzing patient reviews at Seneca Medical Center. The goal is to enhance patient care and satisfaction by using sentiment analysis to identify areas for improvement and to provide actionable insights.

**BACKGROUND**

In keeping with Seneca Medical Center's objective to continually improve the patient experience, our team has performed considerable research into the use of AI in healthcare, with a special emphasis on sensory analytics techniques. We investigated the performance of various machine learning models in analysing complicated linguistic structures in patient responses.

**DETAILS**

Our progress includes:

* A complete literature review of AI and NLP applications in healthcare, with a focus on sentiment analysis methods.
* A thorough study proposal explaining our techniques, goals, and a methodical approach to data collecting and analysis.
* Data gathering begins, with aggregating patient reviews from numerous platforms to ensure a broad and representative dataset.

**MY CONTRIBUTIONS**

My individual contributions have been pivotal:

* Spearheading the literature review and identifying key technologies such as TensorFlow and Natural Language Toolkit (NLTK) for our model.
* Co-developing the research proposal with an emphasis on ethical data handling and model transparency.
* Curating datasets and leading the preprocessing of data to ensure quality input for our AI models.
* Designing the sentiment analysis model, incorporating feedback mechanisms for continuous learning and accuracy improvement.
* Implementing the CRAAP test to our research sources to maintain the highest standard of information integrity.
* Overseeing the project management aspects by leveraging digital tools like Trello for task tracking and Slack for team communication.

**CHALLENGES AND SOLUTIONS**

A primary challenge involved integrating the diverse skill sets of our team to meet the project’s multifaceted demands. My solution was to implement a role-based structure, allowing members to focus on areas such as data engineering, model training, and results interpretation, thus fostering efficient progress and deepening our collective expertise.

**CLOSING**

The project is currently in the data analysis stage. We have started training our sentiment analysis model, and preliminary findings show promising results in recognising sentiment patterns. Given the project's complexity and potential, I respectfully request an extension until November 25th, 2023 to ensure a thorough examination and the formulation of complete suggestions. This extra time will also allow us to interact with Seneca Medical Centre stakeholders for input and adjust our model as needed. With this extension, I am optimistic that our project will dramatically improve patient care and happiness at Seneca Medical Centre.