ABSTRACT

The research topic will revolve around assessing the accuracy, efficacy, speed, time, and storage of machine learning when utilized to identify allergies within individuals and how it compares to modern day allergy test methods. One of the methods to be conducted is training a Large Language Model(LLM) so that it will use data provided by researched documentation revolving around allergy likelihood factors such as environmental data, family medical history, or food patterns. The other methods to be conducted is once the LLM is trained, it will then be written into a web application, deployed, and then sent out through a link to a variety of students across Stetson University and University of Florida to receive user feedback on how accurate the AI was in the allergy prediction it made towards the user. The third method to be conducted is to implement a way to test the LLM in terms of time complexity when run on a regular machine, the computer science department server, and a regular laptop. The fourth method to be conducted would be to implement a way to test the LLM in terms of space complexity when on a regular machine, a regular laptop, and the computer science department server. The final method is to conduct research on the background information in regards to the modern day allergy test, then compare said information to the LLM details that were gathered from earlier.