Capstone Proposal

Writing is an essential skill. However, many students are not proficient writers. The National Assessment of Educational Progress says that less than a third of the school seniors are not skilled writers. Unfortunately, students from low-income, Black, or Hispanic families fare even worse. Less than 15 percent of these students demonstrate writing proficiency. One way to help these students enhance their writing skills is through an automated feedback tool that evaluates their written work.

The existing tools have some drawbacks. One of the drawbacks is that they failed to identify the writing structures in essays, such as the writer's claims, support for claims, etc. Also, many of these tools are proprietary. Hence, these tools need to be bought or subscribed, and the faculties and educators cannot help the students. It is virtually impossible for schools with limited funding to use such tools.

The main aim or the problem statement of this project is to produce a model that accurately classifies different structure elements used in the student's essay. The first phase would include developing a model using Transformers with Chunking, then using Transformers without Chunking, and concluding with a model using LSTM. The performances of these models would be recorded and used as baselines. The next phase would be to enhance these models and find the best model. The final stage would involve developing a GUI (Graphical User Interface) where the various structural components of an essay are classified.