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COS 4091A
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Project: DNA Sequence Visualizer and Analyzer
Prof. Zachary Hutchinson

Progress Report 5

This week, I successfully completed the implementation and integration of the Boyer-Moore search algorithm. The algorithm is now fully functional, capable of taking any user-input or predefined DNA pattern and returning a list of all match positions within the loaded sequence. It handles searches for biological motifs like start and stop codons.

My primary development goal now is to start implementing the second algorithm and I started reading more about tries, specifically in bioinformatics. This algorithm should significantly optimize the performance for repeated searches.

In parallel with coding, I have started outlining the midterm report. I'm figuring out how to structure it and what to include to cover the project's motivation and the completed system architecture (including the DNASequence data model and the Boyer-Moore algorithm), as well as a detailed plan for the remaining deliverables. I aim to have a draft by the end of next week to allow time for changes. Furthermore, I started thinking how to assemble the presentation slides, in order to effectively visualize the application's workflow and user interface.

https://github.com/yYana33/senior-project