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Summary

This article summarizes a proposed and developed solution for providing downloadable and renderable molecular graphics of extremely large sized structures. The solution provided involves developing extensions for the NGL WebGL-based molecular viewer which manages memory efficiently enough to sustain the multiple scales needed to display an effective visualization of molecules. One of the strategies used to optimize this memory utilization is allowing the resusage of said memory, preventing data from being duplicated in the process through a created parser. Various tables and diagrams are listed to show the audience of the project's successes in rendering time and memory usage, providing credibility to their claims. The overall purpose of such a solution is to assist in biological research, as more improvements arise in molecular visualization, the easier it could be for the industry to grow as a whole.