Project ID: PW22KKV01

Project Title: Data Structures and Algorithms Visualizer

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Project Abstract:

Algorithms and data structures form the foundation of Computer Science. An algorithm is a way to implement a solution to a computational problem while a data structure is just a way to store data. Despite numerous advances in hardware and software technologies over the decades, it is imperative that the problem solver possess the tools and mental models necessary to implement an efficient solution (in terms of time and space). The right algorithm and data structure combo can make the difference between a solution that runs in milliseconds versus one that takes hours / days to run. Working with large amounts of data to solve complex problems fast is the need of the hour.

Gaining a good understanding of how they fundamentally work at a low level and using them to model computational problems has proven to be a challenging task for both students and tutors. Thus, the project aims to bridge this gap by creating a visually-pleasing, intuitive online learning experience to help problem-solvers understand how they work by allowing the users of the web application to input their data, create and see the data structures and algorithms in an

animated action.

Code execution: Demonstrated during Capstone Phase-II ESA review