**Path Finding Visualizer Application for Algorithms**

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**Abstract**

Visualization is an efficient way of learning any concept faster than conventional methods. Modern technology allows creating e-Learning tools that also helps in improving computer science education very much. The goal of this project is to create a web based e-Learning tool, “Path Finding Visualizer”, which can be used to visualize shortest path algorithms. The conceptual application of the project is illustrated by implementation of algorithms like Dijkstra’s, A\* , DFS , BFS , Greedy Best-First search , Swarm Algorithm , Convergent Swarm Algorithm , Bidirectional Swarm Algorithm . This project aims to complete all these tasks with some knowledge of HTML, CSS, JavaScript. The end product is a web application so that any user can easily see and learn the working of the algorithms. User-friendliness of the project provides user with easy instructions on how to operate it. The initial results of using the application show promises of the benefits of this e-Learning tool towards students getting a good understanding of paths finding algorithms.

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