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The Backbone of Computing: An Exploration of Data Structures

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Abstract: *Data structures are the foundation of computing, providing efficient ways to store and manipulate data. They are essential for designing and implementing algorithms that can handle large amounts of information quickly and accurately. In this paper, we explore the world of data structures, examining their basic principles, properties, and uses. We start by introducing the most common data structures, such as arrays, linked lists, stacks, queues, trees, and graphs, and discuss their advantages and limitations.*

Keywords: Data structures, Algorithms.

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