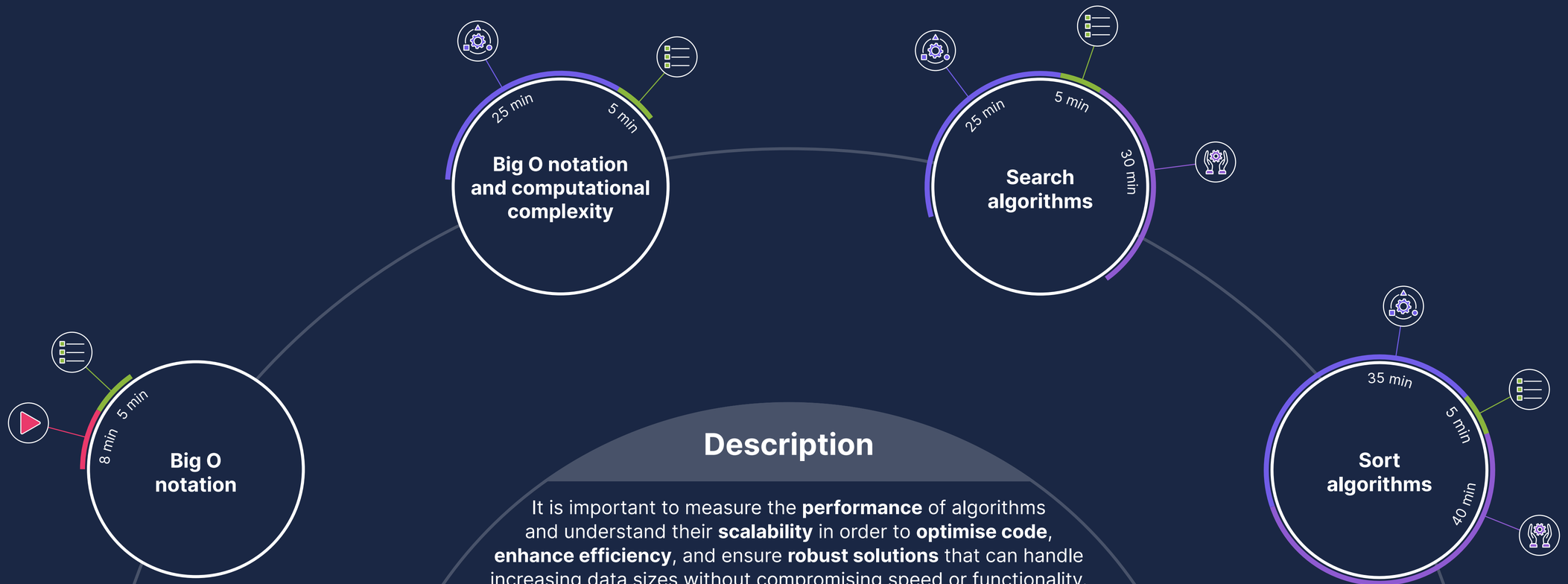
Algorithms and algorithmic complexity - Lesson overview

Learning objectives:

- Understand the concepts of computational complexity and Big O notation.
- Understand the concepts of search and sort algorithms and their complexity.
- Learn how to write pseudocode for search and sort algorithms.

Video
Knowledge questions
Examples
Exercise



Description

It is important to measure the **performance** of algorithms and understand their **scalability** in order to **optimise code**, **enhance efficiency**, and ensure **robust solutions** that can handle increasing data sizes without compromising speed or functionality.

In this lesson, we'll explore the fundamental concepts of **computational complexity** and **Big O notation**, providing a clear understanding of algorithm efficiency. Delving into **search algorithms**, we'll examine their complexities and discuss the significance of efficient search strategies. We will also explore how to craft **pseudocode** for both search and **sort algorithms**, fostering a practical understanding of algorithmic design and analysis.