The Hitchhiker's Guide to Design and Analysis of Algorithms

CSE 2222

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Abstract

This course will serve as an introduction to algorithms and their workings. We will cover the different types of asymptotic notations, some widely used algorithm design techniques and analyse their efficiency.

Syllabus

1. **Module 1**   **8 Hours**
   Introduction
   Fundamentals of Analysis of Algorithmic Efficiency

2. **Module 2**   **10 Hours**
   Brute Force Techniques
   Decrease and Conquer

3. **Module 3**   **10 Hours**
   Divide and Conquer
   Transform and Conquer

4. **Module 4**   **10 Hours**
   Space and Time Tradeoffs
   Dynamic Programming

5. **Module 5**   **10 Hours**
   Greedy Techniques
   Limitations of Algorithmic Power

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