

Computer Science Wider Reading List



Student Name:

Target Grade:

Inspirational Reading - these are books that students should read if they are studying the subject. These are suggested in order to build enthusiasm and passion for the subject.

- **Computer Science: An Overview"** by J. Glenn Brookshear and Dennis Brylow - This book provides a comprehensive introduction to computer science, covering various topics including algorithms, programming languages, and computer hardware
- **The Pragmatic Programmer: Your Journey to Mastery"** by Andrew Hunt and David Thomas - This book offers practical advice and best practices for software development, covering topics like code organisation, debugging, and teamwork.

Aspirational Reading - these are books that students should read if they are interested in studying this subject further Post 18. These books are strongly recommended if you are aiming for Grade A*/A in this subject.

- **Structure and Interpretation of Computer Programs"** by Harold Abelson and Gerald Jay Sussman - This classic book focuses on programming and computational problem-solving. It covers fundamental concepts using the Scheme programming language
- **Artificial Intelligence: A Modern Approach"** by Stuart Russell and Peter Norvig - This book is a comprehensive guide to artificial intelligence, covering topics such as problem-solving, knowledge representation, machine learning, and robotics
- **Clean Code: A Handbook of Agile Software Craftsmanship"** by Robert C. Martin - This book emphasises the importance of writing clean and maintainable code. It provides guidelines and principles for improving the quality of software
- **Computer Networking: A Top-Down Approach"** by James F. Kurose and Keith W. Ross - This book introduces the fundamentals of computer networking, covering topics such as network protocols, TCP/IP, and network security
- **Introduction to the Theory of Computation"** by Michael Sipser - This book explores the theory of computation and formal languages, including regular languages, context-free languages, and Turing machines
- **Computer Systems: A Programmer's Perspective"** by Randal E. Bryant and David R. O'Hallaron - This book provides an in-depth understanding of computer systems, including topics like assembly language, memory hierarchy, and input/output
- **Data Structures and Algorithms in Python"** by Michael T. Goodrich, Roberto Tamassia, and Michael H. Goldwasser - This book covers data structures and algorithms using the Python programming language, providing practical examples and exercises
- **Database System Concepts"** by Abraham Silberschatz, Henry F. Korth, and S. Sudarshan - This book introduces the fundamental concepts of database systems, including relational databases, SQL, and transaction management

It should be stressed that the above list is in no way exhaustive, you should seek to branch out from these suggestions in order to follow your own interests and passions.

Computer Science Wider Reading List



Other Sources of Information

<https://www.bbc.co.uk/news/technology>

<https://news.sky.com/technology>

<https://www.theverge.com/tech>

<https://www.wired.co.uk/topic/technology>

It should be stressed that the above list is in no way exhaustive, you should seek to branch out from these suggestions in order to follow your own interests and passions.