

# Coding and Programming:

## An online reading list from the IET Library



These eBooks and ejournals, available via the [IET Virtual Library](https://theiet.org/virtual-library), have been selected on the topics of coding and programming. They cover topics such as artificial intelligence, programming languages, and system design.

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## Ebooks (provided by EBSCO and Knovel)

**Python - An Introduction to Programming (2nd Edition), James R. Parker. (2021).** This book is an introduction to programming concepts that uses Python 3 as the target language. It follows a practical just in time presentation where material is given to the student when it is needed.

**Computational Methodologies for Electrical and Electronics Engineers, Rajiv Singh et al. (2021).** This book is a collection of innovative research that provides a complete insight and overview of the application of intelligent computational techniques in power and energy, covering a wide range of topics.

**Practical Java Programming for IoT, AI, and Blockchain, Perry Xiao. (2019).** This book uses Java as a tool to help you learn new digital technologies and to be better prepared for the future changes.

**Convolutional Neural Networks in Visual Computing: A Concise Guide, Ragav Venkatesan and Baoxin Li. (2018).** This book covers the fundamentals in designing and deploying techniques using deep architectures. It is intended to serve as a beginner's guide to engineers or students who want to have a quick start on learning and/or building deep learning systems.

**Digital System Design Using FSMs: A Practical Learning Approach, Peter D. Minns. (2021).** This is a concise guide perfect for digital designers and students of electronic engineering who work in or study embedded systems Digital System Design using FSMs.

**Introduction to Python for Science and Engineering, David J. Pine. (2019).** Readers will see why Python is such a widely appealing program, and learn the basics of syntax, data structures, input and output, plotting, user-defined functions, numerical routines, animation, and visualization.

**AI for Cars, Josep Aulinas and Hanky Sjafrie. (2022).** From pedestrian detection to driver monitoring to recommendation engines, the book discusses the background, research and progress thousands of talented engineers and researchers have achieved thus far, and their plans to deploy this life-saving technology all over the world.

**Artificial Intelligence and Machine Learning Applications in Civil, Mechanical, and Industrial Engineering, Gebrail Bekdaş et al. (2019).** This is a collection of innovative research on the methods and implementation of machine learning and AI in multiple facets of engineering, for anyone seeking current research on solving engineering problems using smart technology.

**Practical Model-Based Systems Engineering, José Luis Fernández Pérez and Carlos Hernandez. (2019).** This book provides information on how to identify, classify and specify the system requirements of a new product or service. Using Systems Modeling Language constructs, readers will be able to apply ISE & PPOOA methodology in their own systems.

**Turing's Vision: The Birth of Computer Science, Chris Bernhardt. (2016).** This book explains the theory that is the basis of computer science, Turing's most important contribution, for the general reader, and argues that the strength of Turing's theory is its simplicity.

## Ejournals (provided by EBSCO)

**Mathematical Programming.** (Provides information dealing with every theoretical, computational & applicational aspect of mathematical programming.)

**Scientific Programming.** (Research in software engineering environments, tools, languages, and models aimed at supporting the engineering computing.)

**Distributed Computing.** (Covers novel architectures of distributed systems and computer networks, communication protocols and hierarchies, verification of distributed systems.)

**International Journal of Parallel Programming.** (Original articles about the computer and information sciences, especially programming and parallel computing systems.)

**ACM Transactions on Programming Languages & Systems.** (Publishes research and correspondence relevant to the logic and efficiency of programming languages systems.)

**New Generation Computing.** (Publishes works relevant to the fields of programming, distributed and parallel computing, knowledge-based systems, and emergent systems.)

**Computing.** (Presents the latest research results from computer science and numerical computation.)

**Computer Science & Information Systems.** (Communicates important research and development results in the areas of computer science, software engineering, and information systems.)

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