

Akram El Tabbah

# THEORY OF COMPUTATION

**Explore what computers *can* and *cannot* do.**

This textbook offers a comprehensive and accessible introduction to the fundamental concepts and principles that govern the field of computation. Covering essential topics such as Formal Languages, Deterministic and Non-deterministic Finite Automata, Regular Expressions, Context-Free Grammars, Turing Machines, and NP-Completeness, this book provides students with a deep understanding of both the capabilities and boundaries of computational systems. Each chapter is carefully structured to present complex ideas in a simple, clear, and engaging manner, making it an invaluable resource for students.

