

Software Architecture Made Simple

A 'Simplicity-First' Approach to Software in the Age of Complexity

Modern software development is often overwhelmed by unnecessary complexity. Teams tend to adopt microservices as the default approach, layer frameworks upon frameworks, and find themselves spending more time managing architecture than delivering real value. This complexity leads to fragility, slows down development, increases costs, and leaves developers feeling burnt out.

The "Simplicity-First" approach serves as both a toolkit and a practical guide for reversing this trend. It introduces a clear philosophy that software should be designed so simply that it can pass the '2 AM Test' whereby any developer should be able to understand and fix it under stress. Through key principles, case studies, and actionable patterns, equips developers, architects, and leaders with the mindset and tools needed to build systems that are resilient, sustainable and easy to understand.

We will explore the roots of software complexity, and the pitfalls of designing for edge cases first, offering practical architectural strategies, such as opting for modular monoliths instead of microservice sprawl, scaling intelligently rather than excessively, and modernizing legacy systems with hybrid approaches.

The 'Simplicity-First' approach connects to the Green Software movement, highlighting how complexity can waste energy and increase carbon footprints, while simplicity contributes to greener, more cost-effective systems. It also addresses the rise of AI in software development, examining how AI can either simplify processes or introduce hidden complexities, and how teams can implement human-in-the-loop decision-making to maintain clean design.

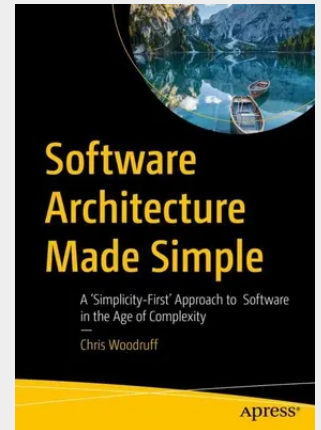
You Will Learn:

- How to recognize and avoid software complexity traps
- Principles like the Half-Rule of Simplicity and the 2 AM Test for guiding design
- Practical strategies for modular monoliths, scaling and legacy modernization
- How to align software design with sustainability goals
- How to use AI responsibly in architecture and construction without creating black boxes

This Book is for:

- Software developers (intermediate to advanced) frustrated with complexity
- Solution and enterprise architects looking for strategies that balance business and technology needs
- Engineering leaders/CTOs interested in sustainable, cost-effective architecture

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