Introduction

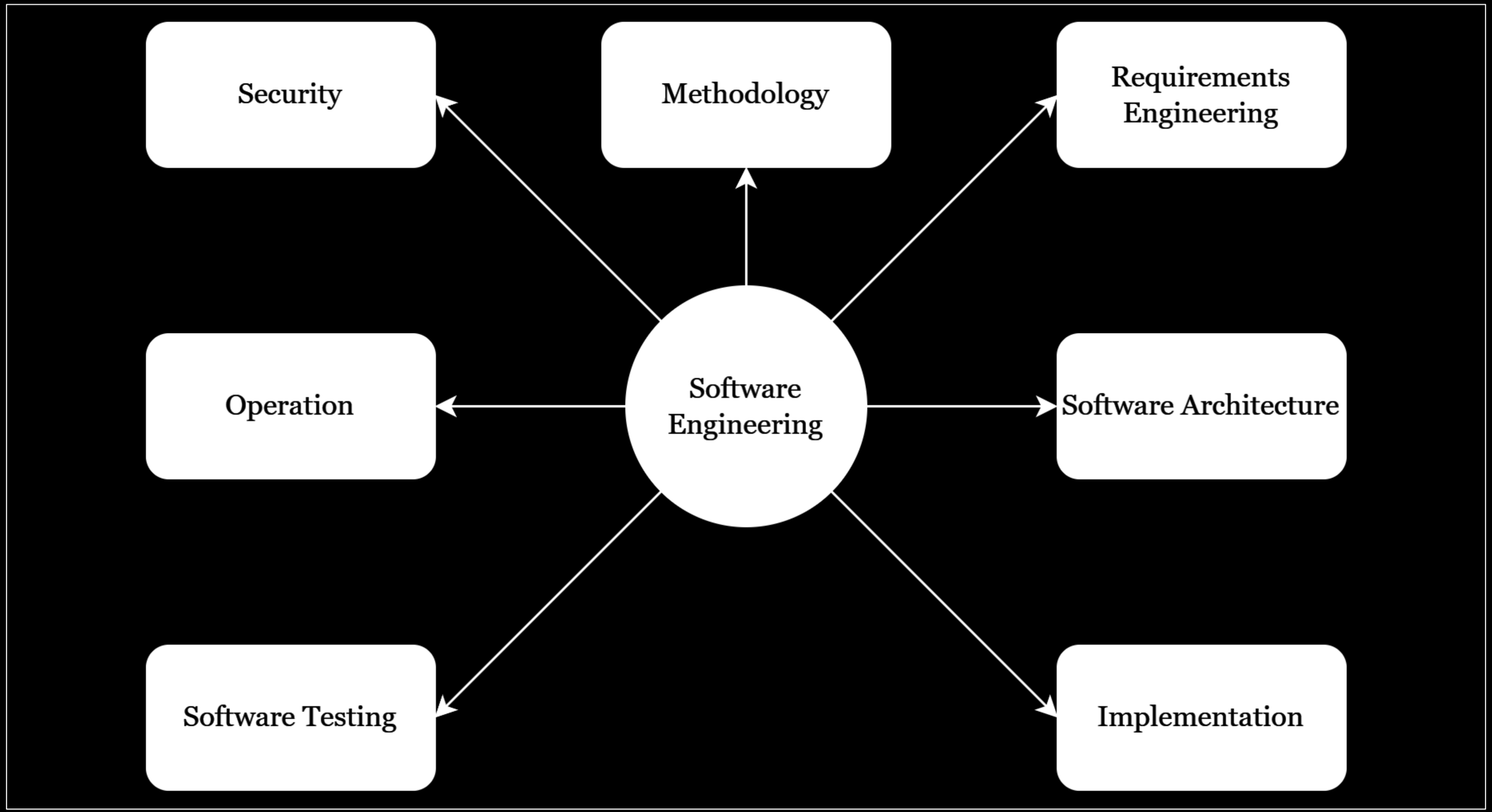
Systems Analysis & Design

Learning Objectives

By the end of this session, you will have acquired the following information:

- The software engineering body of knowledge
- The role of this course, Systems Analysis & Design, within the field
- Detailed syllabus
- How to contact me
- The grading policy
- The magnificent seven
- The available resources

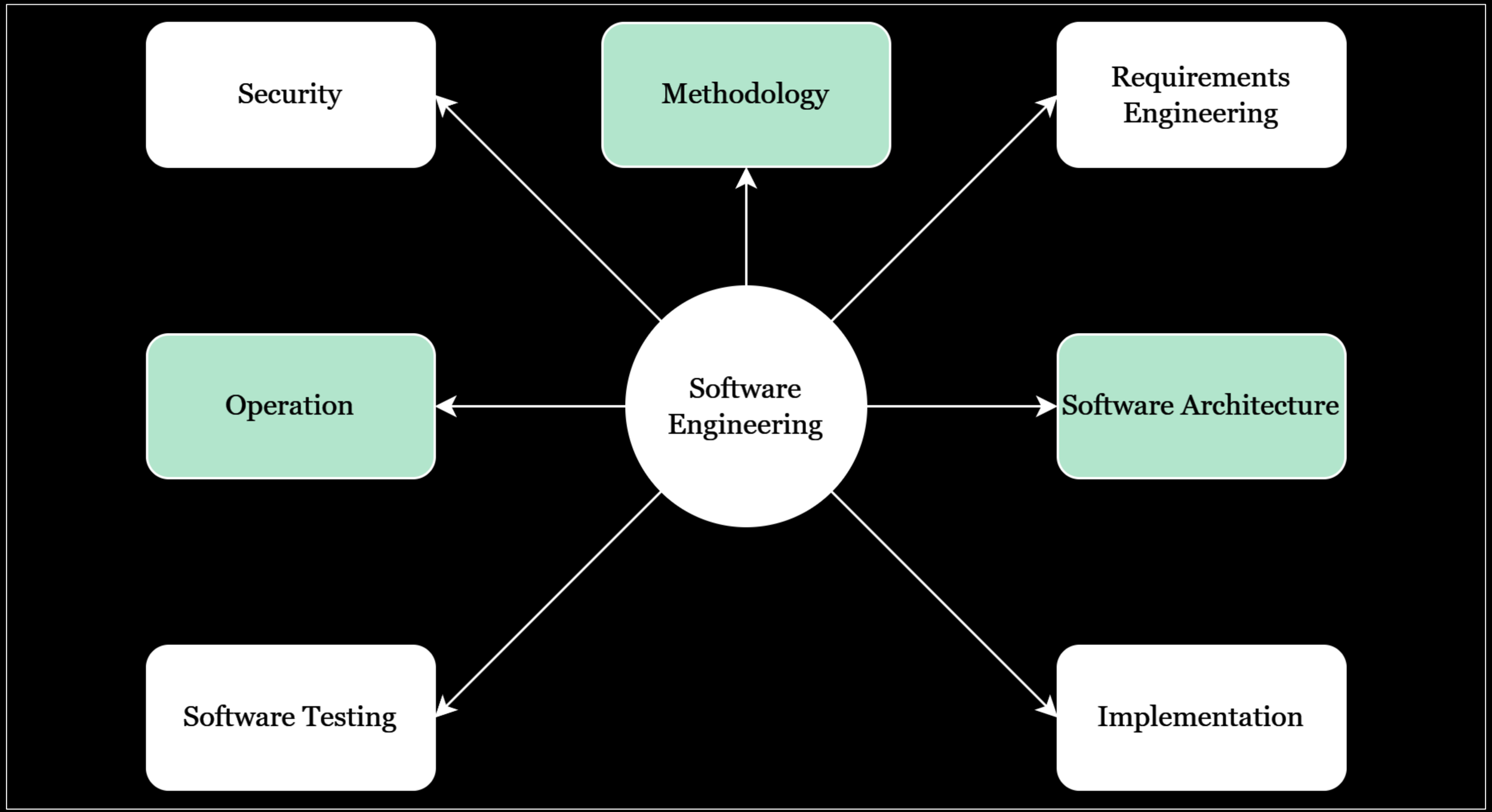
SE Body Of Knowledge


Security
Methodology
Requirements Engineering
Operation
Software Engineering
Software Architecture
Software Testing
Implementation

SE Definition

The application of a systematic, disciplined, quantifiable approach
to the development, operation, and maintenance of software;
that is, the application of engineering to software.

Systems Analysis & Design


Security
Methodology
Requirements Engineering
Operation
Software Engineering
Software Architecture
Software Testing
Implementation

Syllabus

Contact

Instructor: Alireza Aghamohammadi

- Email: al.aghamohammadi@gmail.com

Sending an email is the best way to reach me.

You can expect to get a response within 24 hours during business hours.

Please do not hesitate to contact me if you have any questions or need consultancy.

Head TA: Amirmahdi Namjoo

- Telegram: @amir_astrophysics

Grading Policy

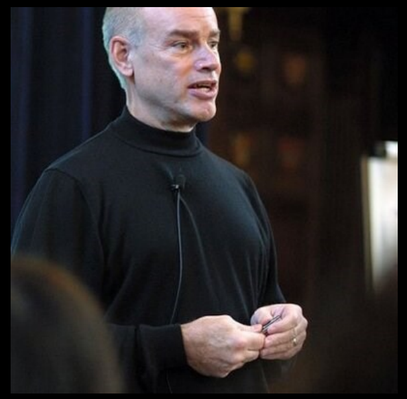
- Homework & Project: 11.5 points
- Midterm: 5 points
- Final: 5 points

You need to score at least 1.5 on the final exam in order to pass the course.

The magnificent seven

Martin Fowler

Jeff Sutherland

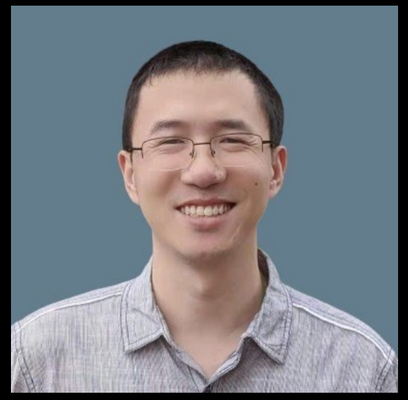


Ken Schwaber

Sam Newman

Dave Farley

Rick Kazman



Alex Xu

Resources

1. Scrum Guides (2020)
2. Essential Scrum: A Practical Guide to the Most Popular Agile Process (2012)
3. Software Architecture in Practice (2022)
4. System Design Interview — An Insider's Guide (2020)
5. System Design Interview — An Insider's Guide: Volume 2 (2022)
6. Building Microservices: Designing Fine-Grained Systems (2021)
7. Designing Data-Intensive Applications: The Big Ideas Behind Reliable, Scalable, and Maintainable Systems (2017)

8. Fundamentals of Software Architecture: An Engineering Approach (2020)
9. Software Architecture: The Hard Parts (2022)
10. Release It!: Design and Deploy Production-Ready Software (2018)
11. The Phoenix Project: A Novel about IT, DevOps, and Helping Your Business Win (2013)
12. Grokking Continuous Delivery (2022)
13. Learn Docker in a Month of Lunches (2020)
14. Learn Kubernetes in a Month of Lunches (2021)

15. Ansible for DevOps: Server and configuration management for humans (2023)
16. Logging in Action: With Fluentd, Kubernetes and more (2022)
17. Site Reliability Engineering: How Google Runs Production Systems (2016)