# FE Vol.1 Resources by Chapter

### **About**

Free resources for Vol.1 are listed below. Those with *[Deep Dive]* prefix are for a more comprehensive approach, should you afford time and effort.

#### <u>Disclaimer</u>

- I do not own any of the resources, nor have any official affiliation with ITPEC organization.
- This may not cover the entirety of FE vol. 1 material.

#### **Resources**

- Chapter 1 & 2 Basics
  - o <u>How Computers Work</u>
  - o Crash Course Computer Science (Ep. 3 Ep. 9)
  - GCSE Computer Science (Ep. 1 Ep. 5)
  - o <u>Bitwise Operations</u>
  - o [Deep Dive] nand2tetris
- Chapter 3 Operating Systems

- <u>Crash Course Computer Science</u> (Ep. 19 Ep. 24)
- o [Deep Dive] Three Easy Pieces

#### • Chapter 4 Databases

- o Database Normalization
- o SQL Explanation
- o SQL Course (freecodecamp)
- o <u>SQL Course (codecademy)</u>
- o [Deep Dive] <u>Database Fundamentals</u>

#### • Chapter 5 & 6 Networking and Security

- o <u>Crash Course Computer Science</u> (Ep. 29 Ep. 34)
- o Networking Animated Videos (Relevant Topics)
- o <u>Network Addressing</u>
- o The OSI Model by Example
- o <u>Security and Cryptography</u>

## • Chapter 7 Algorithms & Data Structures

- o Crash Course Computer Science (Ep. 11 Ep. 15)
- o <u>CS50</u>
- o Data Structures
- o Sorting Algorithms Visualizations

o Data Structure Visualizations

## Programming

- o <u>The Odin Project</u>
- o <u>freecodecamp</u>
- o <u>Java Programming</u> (eBook)

### • Others

- o <u>Diagramming</u> (Relevant Topics)
- o <u>Unified Modelling Language</u>