ECE 245: Tutorials on Coding Example – Fall 2022

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Data Structure – Coding Examples

01. Data Structures in C++ — Part 1. Implementing common data structures in… | by Vijini Mallawaarachchi | Towards Data Science
02. C++ | Data Structures Code Examples (happycodings.com)
03. Stack Data Structure In C++ With Illustration (softwaretestinghelp.com)
04. https://cplusplus.com/doc/tutorial/structures/
05. C++ Data Structures (tutorialspoint.com)
06. 9 C++ data structures you need to know for your coding interview (educative.io)
07. fullText.pdf (clemson.edu)
08. Data Structures in C++ - TechVidvan
09. Data Structure Programs using C and C++ - Solved Data Structure Programs (includehelp.com)
10. Stack Data Structure and Implementation in Python, Java and C/C++ (programiz.com)
11. C++ Tutorial: Linked List - 2020 (bogotobogo.com)
12. Hash Table in C/C++ - A Complete Implementation | DigitalOcean
13. C++ STL: Policy based data structures - Codeforces
14. Abstract Data Types in C++ — Programming and Data Structures 0.2 documentation (eecs280staff.github.io)
15. Data Structures in C++ - Sanfoundry
16. Arrays as Data Structure in C/C++ Programming – MYCPLUS - C and C++ Programming Resources
17. Algorithms and data structures in C/C++ - Cprogramming.com
18. C++ for Programmers: C++'s Built-In Data Structures Cheatsheet | Codecademy
19. Data Structures and Algorithms Problems in C++ using STL | by Coding Freak | Techie Delight | Medium
20. Implementation of A* (redblobgames.com)
21. Red Black Trees (with implementation in C++, Java, and Python) | Algorithm Tutor
22. Chapter 7. Designing lock-free concurrent data structures - C++ Concurrency in Action: Practical Multithreading (manning.com)
23. C++ Structures (struct) (w3schools.com)
24. Implementing Binary tree in C++ (opengenus.org)
25. Section 1: C++ data structures – CS 61 2021 (harvard.edu)
26. Linked List Data Structure (programiz.com)
27. Sets in C++ Explained with Examples | Udacity
28. Top 50+ Data Structure Interview Questions and Answers (2022) - InterviewBit

Algorithm – Coding Examples

01. [C++ Algorithm | Examples of C++ Algorithm with Detail Explanation (educba.com)](#)
02. [C++ Basic Algorithm - Exercises, Practice, Solution - w3resource](#)
03. [The 114 standard C++ algorithms. Introduction | by Šimon Tóth | ITNEXT](#)
04. [Top 5 Beautiful C++ std Algorithms Examples - CodeProject](#)
05. [C++ | Algorithms Code Examples (happycodings.com)](#)
06. [C++ Program for QuickSort - GeeksforGeeks](#)
07. [Dijkstra's Algorithm in C++ | Shortest Path Algorithm | FavTutor](#)
08. [GitHub - daancode/a-star: A* algorithm C++ implementation.](#)
09. [BFS Graph Algorithm(With code in C, C++, Java and Python) (programiz.com)](#)
10. [QuickSort (With Code in Python/C++/Java/C) (programiz.com)](#)
11. [Linear Search Algorithm with C++ Code | Data Structures & Algorithms - Simple Snippets](#)
12. [Quick Sort In C++ With Examples (softwaretestinghelp.com)](#)
13. [Insertion Sort In C++ With Examples (softwaretestinghelp.com)](#)
14. [C++ Algorithms - Sanfoundry](#)
15. [How to implement Dijkstra's Algorithm in C++ (educative.io)](#)
16. [Kmp Algorithm C++ With Code Examples (folkstalk.com)](#)
17. [Red Black Trees (with implementation in C++, Java, and Python) | Algorithm Tutor](#)
18. [https://cplusplus.com/reference/algorithm/](#)
19. [Dijsktra's Algorithm: C++, Python Code Example (guru99.com)](#)
20. [Algorithms library - cppreference.com](#)
21. [C++ Source Codes (fsu.edu)](#)
22. [Algorithms in C++. Complete Search, Greedy, Divide and… | by Vadim Smolyakov | Towards Data Science](#)
23. [Dynamic Programming in C++ - Cprogramming.com](#)
24. [Merge Sort Algorithms and Examples| Merge Sort using Java, C++ (mygreatlearning.com)](#)
25. [C++ Core Guidelines (isocpp.github.io)](#)
26. [C++17 in details: Parallel Algorithms - C++ Stories (cppstories.com)](#)
27. [A Genetic Algorithm Function Optimizer in C++ - technical-recipes.com](#)
28. [Boruvka's algorithm for Minimum Spanning Tree in C++ - CodeSpeedy](#)
29. [Crack the top 40 C++ coding interview questions (educative.io)](#)

Microcontroller – Coding Examples

01. C++ and microcontrollers: using and testing - CodeProject
02. C++ on microcontrollers 1 - introduction, and an output pin class - Wouter van Ooijen (embeddedrelated.com)
03. C++ Tutorial: Embedded Systems Programming - 2020 (bogotobogo.com)
04. How to Use C++ with STM32CubeIDE - Shawn Hymel
05. C++ in Embedded Systems – Part 1 | Embedded.com
06. C++ template metaprogramming for AVR microcontrollers - Embedded.com
07. Embedded Software Development in Visual Studio Code - C++ Team Blog (microsoft.com)
08. Get started with microcontrollers | TensorFlow Lite
09. hirakuni45/RX: Renesas RX Microcontroller, C++ framework, Library, Sample (github.com)
10. Step by Step Procedure for Pic Microcontroller Programming (elprocus.com)
11. A Technique for Register Access in C++ (accu.org)
12. Ten C++ Advantages over C in Embedded Systems | Stratify Labs
13. Step by Step Guide to Microcontroller Programming - HardwareBee
14. 9. Embedded programming - FabAleza (fabacademy.org)
15. "Bare Metal" STM32 Programming (Part 7): Embedded C++ Inheritance – Vivonomicon's Blog
16. How to Program Raspberry Pi Pico using C/C++ SDK (circuitdigest.com)
17. Efficient C Code for 8-bit Microcontrollers (barrgroup.com)
18. Debug output on microcontrollers: how Concepts and Ranges put my printf to rest (pvs-studio.com)
19. SCT µConnect – microcontroller support in YAKINDU Statechart Tools (itemis.com)
20. Embedded C/C++ Unit Testing Basics | Interrupt (memfault.com)
21. The Arduino Language in 10 Points - The Robotics Back-End (roboticsbackend.com)
22. C++ On Embedded Systems | mbedded.ninja
23. Visual Studio Code for C/C++ with ARM Cortex-M: Part 1 – Installation | MCU on Eclipse
24. Everything You Need to Know About Arduino Code (circuito.io)
25. TinyML: Getting Started with TensorFlow Lite for Microcontrollers (digikey.com)
26. Getting started with the GD32VF103 RISC-V Microcontroller | Georg's Log (gms.tf)
27. JavaScript for Microcontrollers and IoT: Part 1 (auth0.com)
28. 4. Outputs, Inputs, and Timers - Making Embedded Systems [Book] (oreilly.com)
29. AVR-gcc.pdf (usc.edu)
30. MicroPython: An Intro to Programming Hardware in Python – Real Python
31. Basics of Embedded C Program : Introduction, Structure and Example (electronicshub.org)
32. Easy Raspberry Pi Pico Microcontroller C / C++ Programming on Windows (paulbupejr.com)
33. Modern C++ in embedded development: using C libraries - Semblie d.o.o Tuzla
34. Useful tips for learning embedded programming | Artekit Labs Tutorials
35. Microcontroller Programming | Sample Programs | Exercise (emertxe.com)
36. MicroPython Optimizes Python for Microcontrollers | ICS
37. C++ On Embedded Systems (bitbashing.io)
38. Programming PIC Microcontrollers : 10 Steps - Instructables
39. C++ Templates for Embedded Code (Part 2) - Lucky Resistor
40. C-Code Tutorial for Using the SPI Interface on the MAX7456 On-Screen Display | Maxim Integrated