

# AI Coding (13+ y/o)

## AI007 – C++ Programming

In this course we will introduce students to the fundamental concepts of C++ in a comprehensive and efficient way. Being different from other programming languages such as Python or Java, C++ has memory management and can be made into a more efficient format which helps with execution time and memory usage where it is needed. Also, C++ brings benefits in the fact that it is a compiled language not an interpreted one, that means that once compile it should run on almost any machine. The course is structured in beginner and advanced levels, with multiple projects throughout. Students will gain a strong understanding on how to use C++ after completing this course. No prior programming knowledge is required but knowledge of other programming languages would help.

### Contents

#### Level #1 - Beginner

- Class 1: C++ getting started / C++ syntax
- Class 2: Input/Variables/Data Types
- Class 3: Operators/C++ Math
- Class 4: Booleans/Conditionals
- Class 5: While/For Loop

#### Level 2 - Advanced

- Class 1: Arrays(1D/2D)/Pointers
- Class 2: Functions; C++ problems
- Class 3: Memory Management and Linked Lists
- Class 4: C++ Games(Mad Libs/Guessing Game/Calculator)

**Syllabus:** <https://school.thinkland.ai/syllabus/>

**Curriculum:** <https://school.thinkland.ai/curriculum>

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