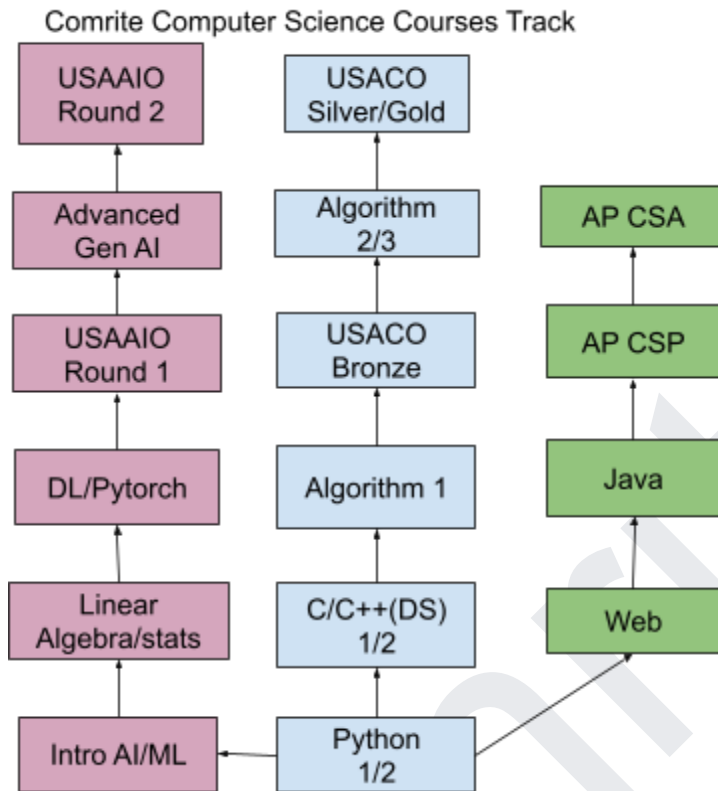


# Comrite Learning - CS courses



See <https://www.comrite.com> for course details.

# Comrite Learning - CS courses

- Offering in-person small size class (Austin 78717), online classes (Microsoft Team)
- In-person class is strongly recommended for kids
- Laptop ( not chrome-book, iPad ) required
- Weekly class follow Round rock ISD schedule
- Free Evaluation to help choose the learning level
- Instructor (Benjamin) has 20 years Software Industry Experience.
- 1-1 private tutoring also available.
- Summer or other courses upon requests

# Comrite Learning - CS courses

## Python Game Programming I ( Python 1 )

### Unleashing Creativity through Code for kids

Python is a perfect language for young students to learn fundamental programming skills and concepts. In this course, students will not only learn python basics, but also will have a chance and fun to write simple games:

- Variables, expressions, statements
- Input, output
- conditional execution, loop
- functions, module programming
- strings, lists, tuples, sets, dictionaries.
- Writing text-based games

Python programming I is ideal for students 10 to 19 years old.

## Python Game Programming II ( Python 2 )

### Unleashing Creativity through Code for kids II

Python Programming II is for students who have completed Python Programming I or have some prior experience in Python. In this course, students will learn more advanced Python OOP and hands-on exercise to write interesting 2D games.

- Python Object Oriented Programming ( OOP )
- Python game basic: display shape, color, objects
- Game Movement and Animation
- How to handle mouse, keyboard in the game
- Add sound and music
- Advanced topic: add Sprites, ladder Wall and collision detection
- Introduction of Game engines
- Distribution python games to others
- Final Projects

Python game programming II is ideal for students 10 to 19 years old.

# Comrite Learning - CS courses

## Introduction to Web and Database ( Web )

Students will learn the basics of creating websites, including HTML, CSS, and JavaScript, and understand how to store and retrieve data using databases. Through hands-on projects and activities, students will develop essential skills in web design, programming, and database management.

- Internet: Web, TCP/IP, DNS, Router
- HTML
- CSS
- Javascript
- Database Modeling and Design
- SQL
- Dynamic Website with Databases
- Project

.This course is ideal for students 10 to 19 years old.

# Comrite Learning - CS courses

## Introduction to Java ( Java )

The course aims to introduce students to the fundamentals of programming using the Java language. Students will learn basic programming concepts, problem-solving techniques, and Java syntax through interactive lessons, coding exercises, and projects. The course will empower students to develop their problem-solving skills and lay a solid foundation for further exploration in computer science.

- Get started with Java
- Basic Java Syntax
- Input/Output
- Control flow
- Function and methods
- Array and Collections
- Object-oriented Programming
- Inheritance

This course is ideal for students 10 to 19 years old.

# Comrite Learning - CS courses

## Introduction to C/C++ ( C/C++ )

The course aims to introduce high school students to the fundamentals of programming using the C++ programming language. Through a combination of theoretical concepts and practical exercises, students will learn about C++ syntax, data types, control structures, functions, and basic object-oriented programming principles. The course will equip students with the necessary skills to write simple C++ programs and lay a solid foundation for further studies in computer science.

- Get started with C/C++
- Basic C++ Syntax
- Input/Output
- Control flow
- Function and methods
- Array and Collections
- Object-oriented Programming
- Inheritance
- Pointer
- C++11 above

This course is ideal for students 10 to 19 years old.

# Comrite Learning - CS courses

## **AP Computer Science Principles - Prep ( AP CSP )**

This course is designed to prepare students for the AP Computer Science Principles exam by providing a comprehensive introduction to the foundational concepts of computer science.

- Binary/Hex data
- Algorithm and Programming
- Computer System and network
- Impact of computing
- Practice Tests

This course is ideal for students Grades 8–12 or 10 to 19 years old.

## **AP Computer Science A - Prep ( AP CSA )**

This course is specifically designed to prepare students for the AP Computer Science A exam by providing a rigorous introduction to programming and computer science concepts. Students will learn Java programming language and explore key topics in computer science, including algorithms, data structures, and object-oriented programming principles. Through a combination of theory, practical exercises, and coding projects, students will develop the skills and knowledge needed to excel in the AP Computer Science A exam.

- Primitive Types
- Using Objects
- Boolean Expressions and if Statements
- Iteration
- Writing Classes
- Array
- ArrayList
- 2D Array
- Inheritance
- Recursion
- Practice Tests

This course is ideal for students Grade 8–12 or 10 to 19 years old.

# Comrite Learning - CS courses

## Introduction to Data Structure and Algorithm ( Algorithm 1 and 2 )

This course is designed to provide a comprehensive introduction to fundamental data structures and algorithms in computer science. Students will learn essential concepts, techniques, and problem-solving strategies required to tackle programming challenges encountered in competitive programming competitions like USACO.

- Array, Lists
- Stack
- Queue
- Tree, Binary Tree
- Graph
- BFS, DFS
- Recursive
- Binary Search
- Dynamic Programming

This course is ideal for students 10 to 19 years old.



# Comrite Learning - CS courses

## USACO Training ( USACO )

The USACO Training Program is designed to prepare students for the USA Computing Olympiad competitions ( bronze level ) by providing comprehensive training in algorithmic problem-solving and programming skills. Through a combination of lectures, practice problems, and mock contests, students will develop the critical thinking, problem-solving, and coding skills necessary to excel in competitive programming contests.

- Time Complexity
- Introduction to Data Structure
- Simulation
- Basic Complete Search
- Complete search with Recursion
- Introduction to Sorting
- Sets and Maps
- Ad hoc problems
- Greedy Algorithm
- Graphs
- Rectangle Geometry

This course is ideal for students 10 to 19 years old.

# Comrite Learning - CS courses

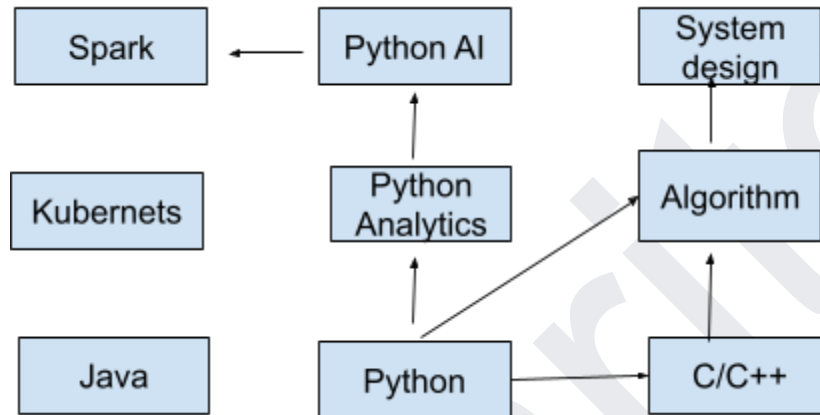
## USAAIO Training

The USAAIO Training Program is designed to prepare students for the USA AI Olympiad competitions ( round-1/2 ) by providing comprehensive training in AI/ML, numpy/pandas, data analysis, Deep learning, GenAI. Through a combination of lectures, practice problems, and mock contests, students will develop the critical thinking, problem-solving, and coding skills necessary to excel in competitive AI contests.

# Comrite Learning - CS courses

## For Professionals

Comrite Computer Science Courses Sequence For professionals Enhancement



# Comrite Learning - CS courses

## For Professionals

### Highlights

- Offering in-person class, online in-person skype classes
- 1-1 private tutoring also available
- Instructor (Benjamin) has 20 years Software Industry Experience.
- Other courses upon requests

# Comrite Learning - CS courses

## Introduction to AI

This course introduces students to the field of Artificial Intelligence (AI) and teaches them how to implement AI algorithms and techniques using the Python programming language. Students will learn about various AI concepts, including machine learning, neural networks, natural language processing, and computer vision, through a combination of theoretical lectures and hands-on coding exercises. By the end of the course, students will have a solid understanding of AI principles and practical experience in building AI applications using Python libraries.

- Introduction to AI
- Python Basic for AI
- Introduction to Machine learning
- Scikit-learn
- Deep learning
- NLP/Computer vision
- Project

This course is ideal for students 10 to 19 years old.

# Comrite Learning - CS courses

## **Kubernetes Quickstart:**

### **Learn and Master Kubernetes with step-by-step Examples**

This course is designed to supercharge your career in one month or at your own pace.

- Kubernetes basic
- K8s install
- Auto-scale
- Storage
- Stateful application
- RBAC

This course is ideal for Software developers, Sysadmin, IT professionals.

## **Jumpstart Spark:**

### **Your 7-day Apache Spark Quick learning**

This course is designed to jump start your big data processing skill set

- Hadoop Basic
- Spark basic
- Spark install
- Spark SQL
- Spark shell
- Demystifying Parallelization
- Programming with PySpark and Scala

This course is ideal for Software developers, Data Analysts, Data Engineers, Data Scientists, IT professionals.