AI Code Academy

Formerly Delaware STEAM Academy

Summer STEM Coding and AI Projects for Kids
at The Independence School

ACA presents well-structured programs using Scratch, Micro.bit, Python, and artificial intelligence for students to learn advanced coding techniques and solve real world problems.

PROJECT-BASED SCRATCH LEVEL 1
(max 12 participants)
When: Session 1: June 20-24; Session 2: June 27-July 1; Session 3: July 18-22; Session 4: July 25-29
(Virtual class on June 20 of the first week)
Grade Level: Rising Grades 2-5
Time: 9:00 am - 12:00 pm
Cost: $255
Instructor: Coach from AI Code Academy
The perfect coding course for beginners, students will learn to code with Scratch, the most popular block-based programming language for kids created by MIT. They will learn fundamental coding skills and how to make interactive games. This course features eight projects, along with one final project. No prior coding experience is needed for this course.

SCRATCH WITH MICROBIT
(max 12 participants)
When: Session 1: July 4 - 8; Session 2: Aug 1-5
Grade Level: Rising Grades 3-5
Time: 9:00 am - 12:00 pm
Cost: $255
Instructor: Coach from AI Code Academy
In this fun course students will learn how to make interactive games and have the opportunity to work with Micro.Bit, a programmable micro-computer. This program provides students with opportunities to tackle complex Scratch projects that help them to build solid coding foundations for machine learning. This lesson features eight projects, along with one final project.

MACHINE LEARNING IN SCRATCH
(max 12 participants)
When: Session 1: July 11 - 15; Session 2: Aug 8-12
Grade Level: Rising Grades 3-5
Cost: $265
Instructor: Coach from AI Code Academy
What is AI? How can we use machine learning to solve problems? In this course, students will have hands-on experience training machine learning models and building things with them. They will create projects and games with Scratch using text, image, or sound recognition. Students are astonished at what they can create! This machine learning course will enhance students' problem-solving skills and logical reasoning. Students must know Scratch for this course.

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INTRO TO ROBLOX WITH LUA
(max 12 participants)
When: Session 1: June 20-24; Session 2: June 27-July 1; Session 3: July 18-22; Session 4: Aug 15-19
Grade Level: Rising Grades 3-7
Time: 9:00 am - 12:00 pm
Cost: $255
Instructor: Coach from AI Code Academy
Roblox is the largest social platform that allows kids to create and play games together in immersive 3D worlds. In this course, students will use Roblox to design and publish fun games to the Roblox website that can reach millions of players. They will learn game design fundamentals and develop coding skills by writing LUA scripts that handle in-game events, triggers, collisions and more.

INT/ADV ROBLOX GAME DESIGN
(max 12 participants)
When: Session 1: July 4 – 8; Session 2: July 25 – 29; Session 4: Aug 8-12
Grade Level: Rising Grades 3-8
Time: 9:00 am - 12:00 pm
Cost: $255
Instructor: Coach from AI Code Academy
This program is for intermediate or advanced students who have at least 10 hours of Robox experience. Students will learn more complex Roblox game building and scripting, Roblox clothing creation, animations, 3D modeling, and monetization. All students will be asked to finish a final project with their own ideas which will be presented on the last day. The skills they learn are adaptable to similar video game engines including Unity and Unreal.

UNITY GAME DESIGN
(max 12 participants)
When: Session 1: July 11 – 15; Session 2: Aug 1-5; Session 2: Aug 15-19
Grade Level: Rising Grades 4-8
Time: 9:00 a.m.- 12:00 pm
Cost: $255
Instructor: Coach from AI Code Academy
Have you ever wanted to design video games instead of just playing them? Unity is one of the best 3D game and graphic design tools in the world, which bridges the fields of art, code, and design. Students will piece together different elements and assets to build their own creations. Using C# programming, they will allow players to interact with their projects. Students will design incredible experiences to share with friends and family, and join a community of millions of developers using Unity!

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PROJECT BASED PYTHON LEVEL 1
(max 12 participants)
When: Session 1: June 20-24; Session 2: June 27-July 1; Session 3: July 18-22; Session 4: Aug 15-19
Grade Level: Rising Grades 5-8
Time: 1:00 pm - 4:00 pm
Cost: $255
Instructor: Coach from AI Code Academy
Students will learn the most popular programming language for software engineering, data science, machine learning, and AI. Students will learn the fundamentals of Python programming, as well as computer graphics and game design using the Turtle library. They will also enhance their presentation skills by giving a demonstration of an original final project. Top students will be invited to participate in the American Computer Science League (https://www.acsl.org).

PROJECT BASED PYTHON LEVEL 2
(max 12 participants)
When: Session 1: July 4-8; Session 2: Aug 1-5
Grade Level: Rising Grades 5-8
Time: 1:00 pm - 4:00 pm
Cost: $255
Instructor: Coach from AI Code Academy
This program is for intermediate or advanced students who have at least 10 hours of Python experience. Students will expand their Python programming skills while creating more complex projects and practicing game design using Pygame. All lessons are project based and each lesson contains one fun project. There will be some quizzes to reinforce the topics covered in class. All students will be asked to finish a final project with their own ideas which will be presented on the last day. Top students will be invited to participate in the American Computer Science League (https://www.acsl.org).

PROJECT BASED JAVASCRIPT
(max 12 participants)
When: Session 1: June 20-24; Session 2: July 4-8; Session 3: July 25-29; Session 4: Aug 15-19
Grade Level: Rising Grades 5-8
Time: 1:00 pm - 4:00 pm
Cost: $255
Instructor: Coach from AI Code Academy
JavaScript is the most popular language for web design, and it's also an excellent way for new programmers to turn ideas and code into something tangible. In this course, students will learn the fundamentals of programming by using this powerful language to build engaging, interactive games. They will create projects with flashy graphics and user interactivity to recreate games they love, build original games from start to finish, and practice game design principles.

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HTML/CSS WEB DESIGN
(max 12 participants)
When: Session 1: June 27-July 1; Session 2: July 11-15; Session 3: Aug 8-12;
Grade Level: Rising Grades 5-8
Time: 1:00 pm - 4:00 pm
Cost: $255
Instructor: Coach from AI Code Academy
This course is designed to provide students with an introduction to the use of HTML, CSS and WordPress for web design. Students will have a complete and wide array of customization freedom in the creation of their own web pages! Lessons will consist of guided projects to teach new web design skills, as well as a final project of each student's original design that students will present to the class. There will be a fun Kahoot review to reinforce all topics learned in the course.

MACHINE LEARNING IN PYTHON WITH BIG DATA
(max 12 participants)
When: Session 1: July 18 – 22; Session 2: Aug 1-5; Session 3: Aug 8-12
Grade Level: Rising Grades 6-8
Time: 1:00 pm - 4:00 pm
Cost: $265
Instructor: Coach from AI Code Academy
What is big data? In this newly developed course, students will gain hands-on experience training machine learning models and applying them to different projects using Python. Students will create classification and regression models to solve real problems, like identifying species of flowers in images, NBA draft prediction, and **stock price prediction**. All lessons are project based, and each lesson contains one fun project. All students will be asked to finish a final project with their own ideas which will be presented on the last day. This machine learning course will enhance students' problem-solving skills. Students must know Python for this course.

Registration: https://lessonbook.aicodeacademy.com/topics/camps

Summer Schedule

Week 1 (June 20-24) (Virtual class on June 20)			
Morning Classes (9 am - 12 pm)		Afternoon Classes (1 pm - 4 pm)	
Project-based Scratch L1	Grades 2–5	Project-based Python Level 1	Grades 5–8
Intro to Roblox and Lua	Grades 3–7	Project-based JavaScript	Grades 5–8

Week 2 (June 27-July 1)			
Morning Classes (9 am - 12 pm)		Afternoon Classes (1 pm - 4 pm)	
Project-based Scratch L1	Grades 2–5	HTML/CSS Web Design	Grades 5–8
Intro to Roblox and Lua	Grades 3–7	Project-based Python Level 1	Grades 5–8

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Week 3 (July 4 - 8)			
Morning Classes (9 am - 12 pm)		Afternoon Classes (1 pm - 4 pm)	
Scratch with MicroBit	Grades 3–5	Project-based Python Level 2	Grades 5–8
Int/Adv Roblox Game Design	Grades 3–8	Project-based JavaScript	Grades 5–8

Week 4 (July 11 - 15)			
Morning Classes (9-12pm)		Afternoon Classes (1-4pm)	
Machine Learning in Scratch	Grades 3–5	HTML/CSS Web Design	Grades 5–8
Unity Game Design	Grades 3–8		

Week 5 (July 18 - 22)			
Morning Classes (9 am - 12 pm)		Afternoon Classes (1 pm - 4 pm)	
Project-based Scratch L1	Grades 2–5	Project-based Python Level 1	Grades 5–8
Intro to Roblox and Lua	Grades 3–7	Machine Learning in Python With Big Data	Grades 5–8

Week 6 (July 25 - 29)			
Morning Classes (9 am - 12 pm)		Afternoon Classes (1 pm - 4 pm)	
Project-based Scratch L1	Grades 2–5		
Int/Adv Roblox Game Design	Grades 3–8	Project-based JavaScript	Grades 5–8

Week 7 (Aug 1-5)			
Morning Classes (9 am - 12 pm)		Afternoon Classes (1 pm - 4 pm)	
Scratch with MicroBit	Grades 3–5	Project-based Python Level 2	Grades 5–8
Unity Game Design	Grades 3–8	Machine Learning in Python With Big Data	Grades 5–8

Week 8 (Aug 8-12)			
Morning Classes (9 am - 12 pm)		Afternoon Classes (1 pm - 4 pm)	
Machine Learning in Scratch	Grades 3–8	HTML/CSS Web Design	Grades 5–8
Int/Adv Roblox and Lua	Grades 3–8	Machine Learning in Python With Big Data	Grades 5–8

Week 9 (Aug 15-19)			
Morning Classes (9 am - 12 pm)		Afternoon Classes (1 pm - 4 pm)	
Unity Game Design	Grades 3–5	Project-based Python Level 1	Grades 5–8
Intro to Roblox and Lua	Grades 3–8	Project-based JavaScript	Grades 5–8

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