### June 21–25 9 AM - Noon

13 Years and up

# PYTHON & SECURITY STEM SUMMER CAMP

In the Python & Security course, high school students and middle school students will learn the fundamentals of Python. Python is a high-level general-purpose programming language used for automation and AI in today's world. Students will apply Python to the Raspberry Pi to create projects.

This Python & Security class for high school students will provide hands-on experience with Python and Raspberry Pi. The Raspberry Pi is a low cost, credit-card sized computer that plugs into a computer monitor or TV, and uses a standard keyboard and mouse. It is a capable little device that enables people of all ages to explore computing and to learn how to program in languages like Scratch and Python. It's capable of doing everything you'd expect a desktop computer to do, from browsing the internet and playing high-definition video, to making spreadsheets, word-processing, and playing games.



### PYTHON AND SECURITY COURSE TOPICS COVERED:

- Fundamentals of Python
- Web Automation + Graphical
  Output
- Python Speech Recognition
- Installing Raspbian onto the Pi
- Building a Security Camera



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## ABOUT THE PYTHON STEM CAMP

Python is a high-level general-purpose programming language used for automation and AI in today's world. With a simple and easy to learn language, you can create anything your imagination desires! The Raspberry Pi is a series of microcomputers that can be used to learn computer science or to make systems out of. You can use it to make a server, a security system, a network-wide adblocker, a thermal scanner, an object detector, and much more!

The Raspberry Pi is a series of microcomputers that can be used to learn computer science, or to make systems out of. You can install almost any operating system image onto it, and use th GPIO pins and connectors to control motors, lights, LED displays, etc. You can use it to make a server, a security system, a network wide adblocker, a thermal scanner, an object detector, and much more!

Students who successfully complete this lesson plan will get a hands-on experience to learn and create projects with Python. This class is will be an introduction to Python with hands-on experience to sharpen your skills using Raspberry Pi. Students will complete functional projects they can use again in this class!

### **TOPICS COVERED**

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- Fundamentals of Python
- Web Automation + Graphical Output
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#### BY THE END OF THE WEEK, WEB PROGRAMMING STUDENTS WILL HAVE GAINED:

- Knowledge of Python Fundamentals
- Experience with Python and Raspberry Pi
- Set up projects with Raspberry Pi
- Build a Security Camera
- And more fun projects!

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