

# Python for Data Science

Welcome



University of Colorado  
Boulder

# Whom We Think You Are

- This specialization is designed for you:
  - Curious about programming
  - Have interest in Data Science
  - Have little or no background in programming
  - Willing to experience and explore a new world
  - Love to play and have fun!



# Who Am I

- My name is Di Wu.
- You can call me Di (pronounced as Dee).
- Have taught Programming Languages, Algorithms and Data Structures, Database Management Systems, Data Mining, and Machine learning.
- I am very excited to work with you for this specialization - Python for Data Science.



# Learning Objectives

- Finishing this specialization, you will:
  - Understand what programming languages are, including Python.
  - Be able to write simple Python programs.
  - Be familiar with functions and Object-Oriented Programming.
  - Be able to use Python packages for data science in specific.



# Specialization Outline

- Course 1: Python Basics
  - Module 1: Introduction to Python
  - Module 2: Variables and Operations
  - Module 3: Flow Control - Branching
  - Module 4: Flow Control - Repetition



# Specialization Outline

- Course 2: Python Functions
  - Module 1: Why we need functions
  - Module 2: Define functions
  - Module 3: Functions with return value
  - Module 4: Functions with arguments



# Specialization Outline

- Course 3: Python Packages for Data Science
  - Module 1: Python Packges
  - Module 2: Numpy
  - Module 3: Pandas
  - Module 4: Matplotlib and others



# Specialization Overview

- Do you like LEGO?
  - In the first two courses, you are going to learn how to play with Python, as you are reading the instruction of a LEGO, and get familiar with all the pieces.
  - In the third course, you are going to apply the knowledge gained previously, and build fantastic projects from different packages.
  - The process will be easy-to-follow, happy-to-play, and interesting-to-apply.
  - Let's get started!

