

# **1 - Python Overview**

(Course: Python Programming)

- In this lecture we will do a brief overview of what Python is, why choose Python for programming, and what you can do with Python.
- This lecture in particular is geared towards people new to programming.

- **Brief History of Python**

- Created in 1990 by Guido van Rossum
- Python 3 released in 2008



- **Brief History of Python**

- Specifically designed as an easy to use language
- High focus on readability of code



- **Why Choose Python?**

- Designed for clear, logical code that is easy to read and learn.
- Lots of existing libraries and frameworks written in Python allowing users to apply Python to a wide variety of tasks.

- **Why Choose Python?**

- Focuses on optimizing developer time, rather than a computer's processing time.
- Great documentation online:
  - **[docs.python.org/3](https://docs.python.org/3)**

- **What can you do with Python?**

- This course first focuses on “base” Python, which consists of the core components of the language and writing scripts and small programs.
- Later we begin to learn about outside libraries and frameworks that greatly expand Python’s capabilities.

- **What can you do with Python?**
  - **Automate simple tasks**
    - Searching for files and editing them
    - Scraping information from a website
    - Reading and editing excel files
    - Work with PDFs
    - Automate emails and text messages
    - Fill out forms



- **What can you do with Python?**
  - **Data Science and Machine Learning**
    - Analyze large data files
    - Create visualizations
    - Perform machine learning tasks
    - Create and run predictive algorithms

- **What can you do with Python?**
  - **Create websites**
    - Use web frameworks such as Django and Flask to handle the backend of a website and user data
    - Create interactive dashboards for users

- Once you understand base Python and begin working with a few libraries, you'll quickly begin to see the vast potential Python has for your own projects!

**Thanks**