

# Python for Economics

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# Why Programming?

- ▶ Looking for Common language between Human and Machine
- ▶ Different Works, Different Languages
- ▶ Why Python?
  - Close to Human Language
  - Easily Connect to other Languages
  - General usage
    - Wide range of fields
    - Great Communication

# Why Programming in Economics?

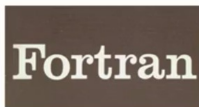
## ► Analysis of Economic Data

- High volume of generated data
- Impossibility of data management in software such as Excel
- Read data from an online database

## ► Quantitative Methods

- Influence of different mechanisms on an economic
- The complexity of economic issues facing economists
- Lack of analytical solutions to problems

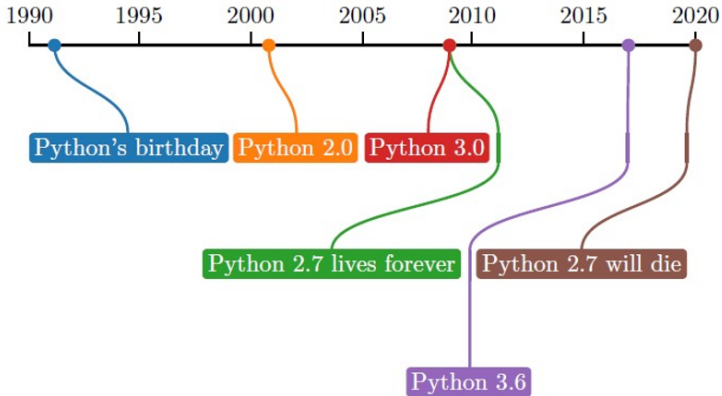
# Programming Languages



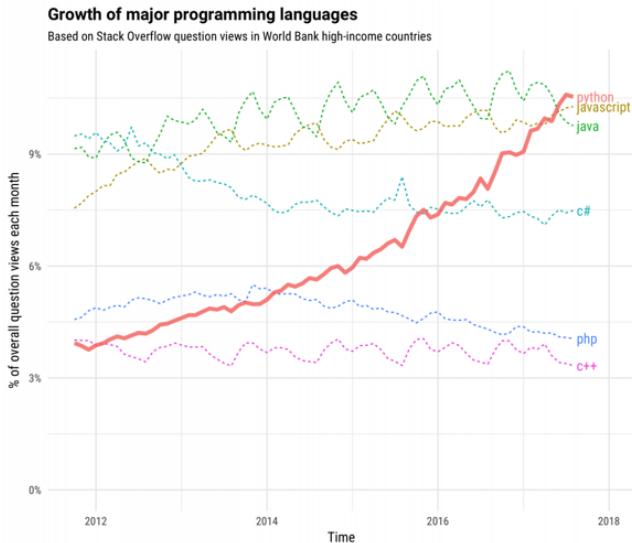
# Comparing the way Python works with common programming languages

- ▶ C/C++ and Fortran:
  - Time-consuming coding
- ▶ MATLAB:
  - Lack of proper economic packages
  - Lack of design, efficiency compared to Python
  - Not open source
- ▶ R
  - Useful in statistics with high variety of packages
- ▶ Stata
- ▶ Julia

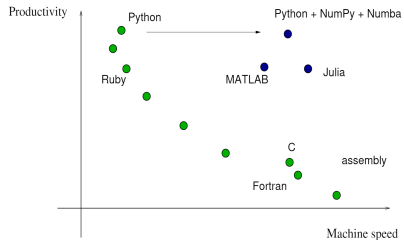
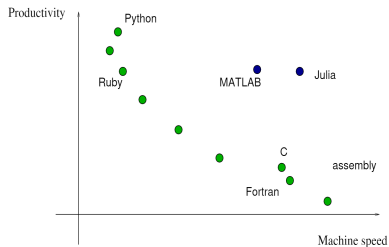
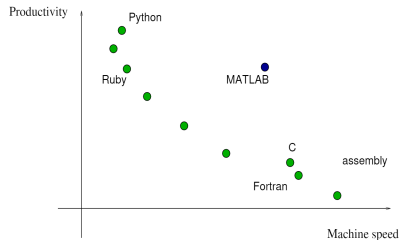
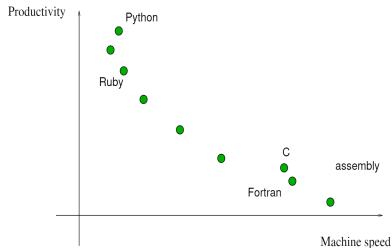
# Overview of the Python development by versions and dates:



# Python has become extremely popular



# Trade-Offs





# Course Content

- ▶ Python Setup
- ▶ Object and Data Structure Basics
- ▶ Python Statements
- ▶ Methods and Functions
- ▶ Modules, Packages
- ▶ Libraries
  - NumPy
  - Matplotlib
  - Pandas
  - SymPy and SciPy
  - ...
- ▶ Stata
- ▶ R Programming

# How to Start?

- ▶ **Read, Read, Read! Write, Write, Write!**
- ▶ [GitHub](#) and [Stack Overflow](#)
- ▶ Editors
- ▶ [Anaconda](#)
- ▶ Search Skill

# Thank you

- ANY QUESTION...?