

Workshop Python for Economics

Saeed Saffari

Email: m.saeed.saffari@gmail.com

GitHub: github.com/saeed-saffari

Faculty of Economics
Shahid Beheshti University

Winter 2025

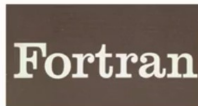
Why Programming?

- ▶ 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

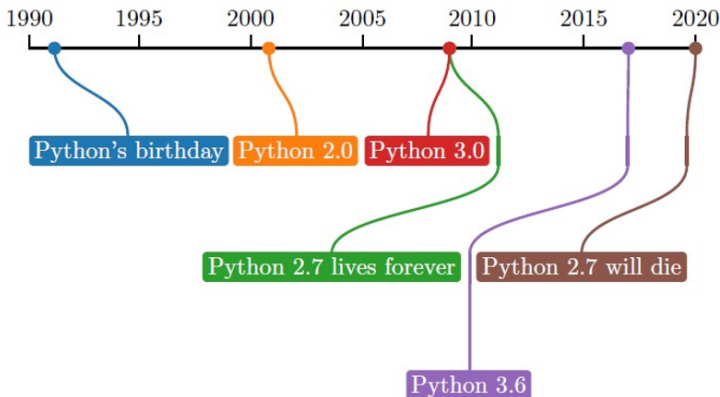
Programming Languages



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

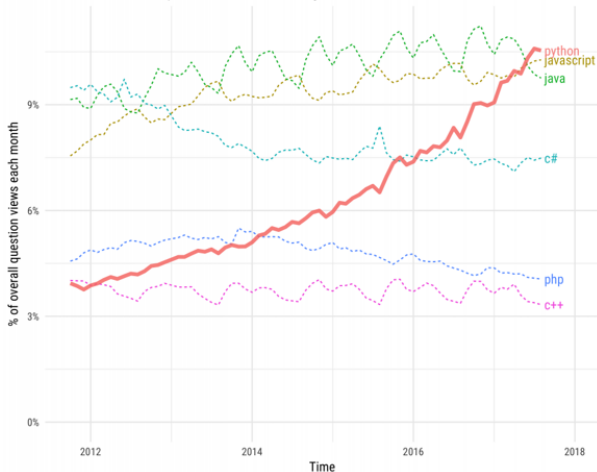
Overview of the Python development by versions and dates:



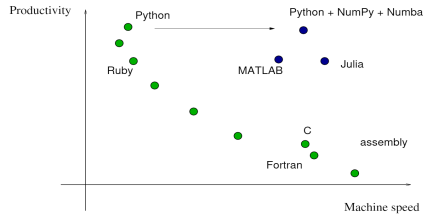
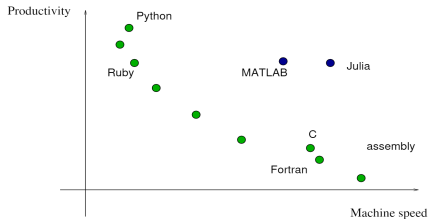
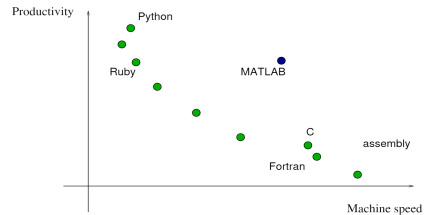
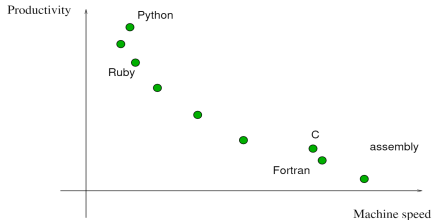
Python has become extremely popular

Growth of major programming languages

Based on Stack Overflow question views in World Bank high-income countries



Trade-Offs



Workshop Content

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

How to Start?

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

Thank you

- ANY QUESTION...?