Workshop
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

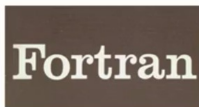# Why Programming in Economics?

- ▶ 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
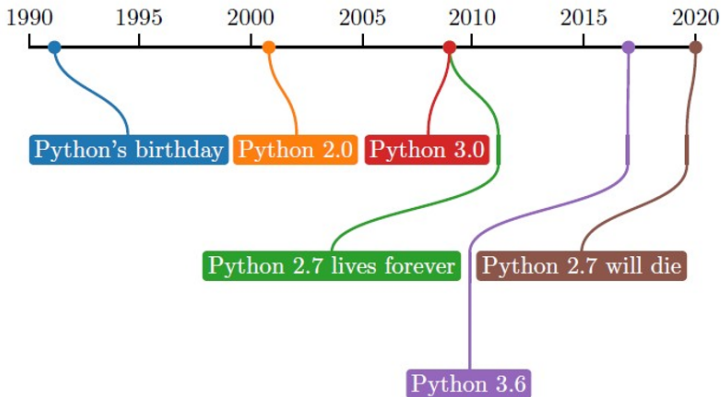 - • Lack of analytical solutions to problems
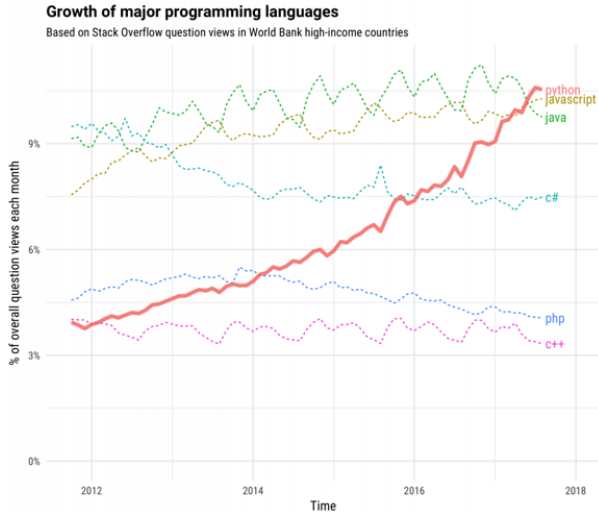
Programming Languages

Comparing the way Python works with common programming languages

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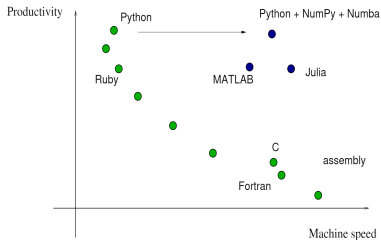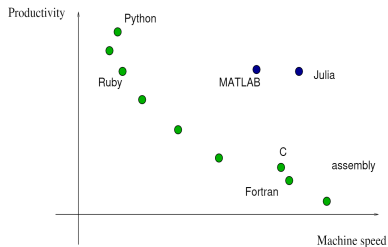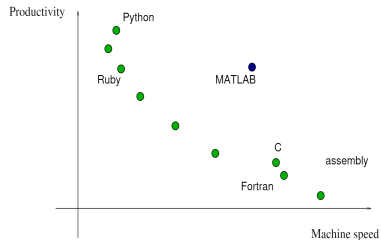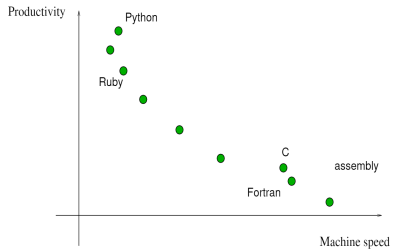- ▶ Stata
- ▶ Julia

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

Saeed Saffari   Python for Economics

Workshop Content

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

How to Start?

- **Read, Read, Read! Write, Write, Write!**

- GitHub and Stack Overflow
- Editors
- Anaconda
- Search Skill

Thank you

- ANY QUESTION...?