Python for Economics

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Why Programming?
Why Python?
Course Content
How to Start?
Thank you

Why Programming?
Why Programming in Economics?
Programming Languages

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

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Why Programming?
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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
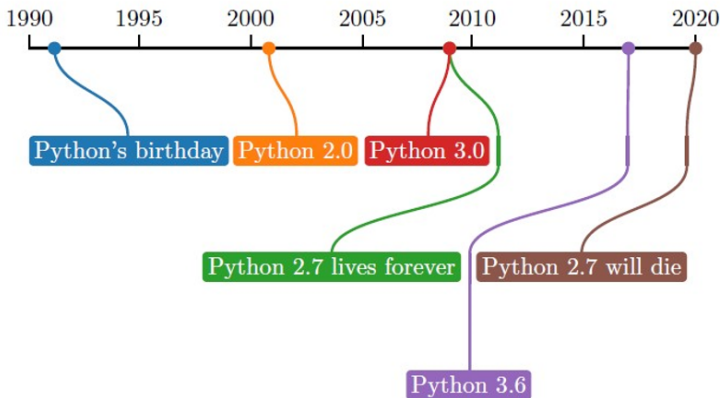 • Lack of analytical solutions to problems

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Programming Languages

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Comparing
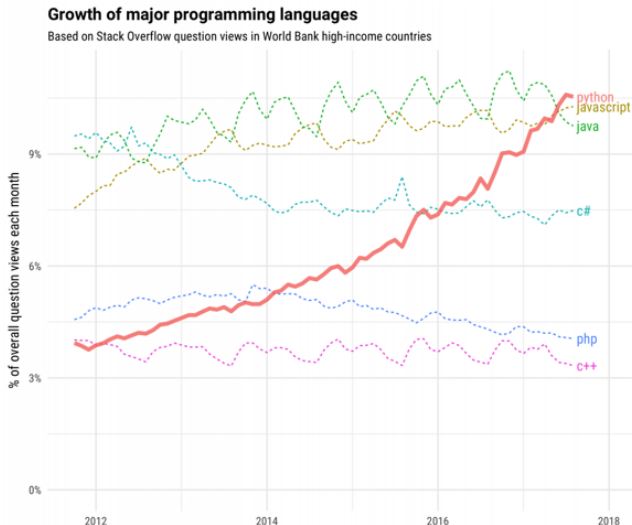Python development
Popularity of Python
Trade-Offs

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
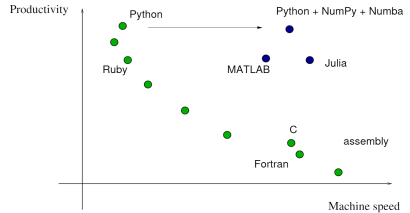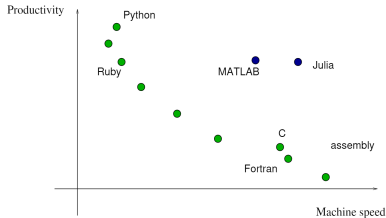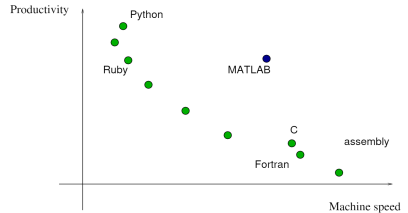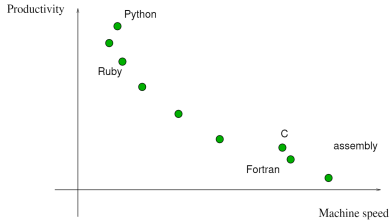- ▶ Stata
- ▶ Julia

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Comparing
Python development
Popularity of Python
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Overview of the Python development by versions and dates:

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Python has become extremely popular

Growth of major programming languages

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

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Trade-Offs

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Course Content

Course Content

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

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How to Start?

How to Start?

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

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

Thank you

- ANY QUESTION...?