

```
def pymarc():  
    """in 30 minutes"""
```

Pymarc in 30 Minutes: Goals

- › Install Python, PyCharm, pymarc library
- › Learn super basic Python functions
- › Run a few scripts with pymarc
- › Discuss additional resources
- › Establish (us) as a community of practice
- › Convince you that YOU *can* code



Pymarc in 30 Minutes: About Me



Pymarc in 30 Minutes:

A Note on Admins

- › If you're not an admin on your machine – this will be harder
- › Opportunity for a team effort!



Pymarc in 30 Minutes: Why Python?

Language	Object Oriented	Can be used for working with MARC Data?	Easy to learn?	Is named after Monty Python?
Python	Yes	Yes	Yes	Yes
PERL	Yes	Yes	I don't know	No
Ruby	Yes	Yes	Yes	No
JavaScript	Yes	Yes	Yes	No
R	No (?)	Yes	Yes	No
XSLT	No (?)	Yes	I don't know but I hear good things!	No



Pymarc in 30 Minutes: A Note on Apple, UNIX, etc.

- › Python 2.7 comes preinstalled on MAC OSX
- › Python comes preinstalled on other UNIX Machines
- › If on a Chrome Book, consider PythonAnywhere (I haven't used, but I hear it works on ChromeBooks)



Pymarc in 30 Minutes: Downloading Python

› Go to Python.org, click on Downloads



Pymarc in 30 Minutes: Python 3 vs. Python 2

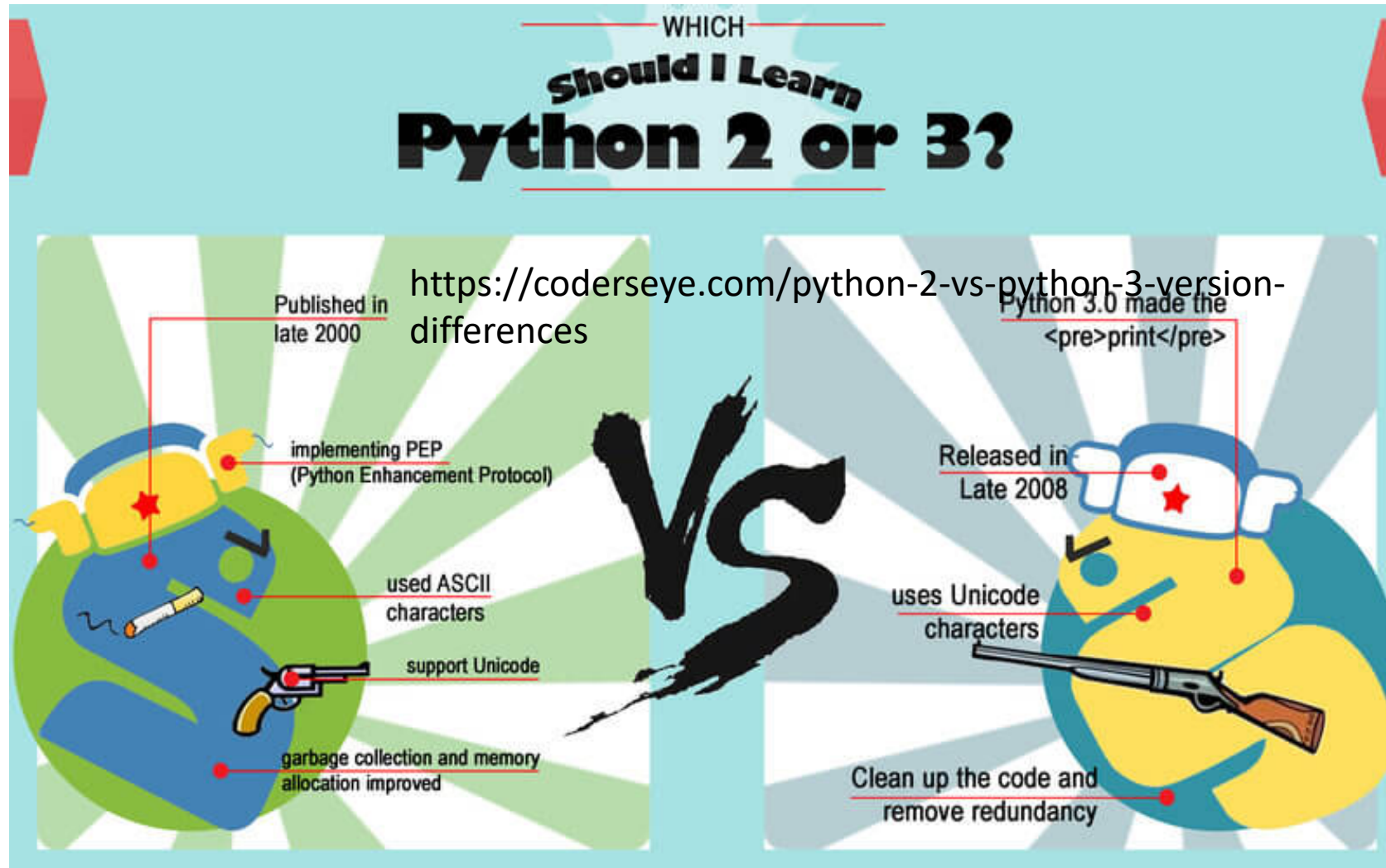
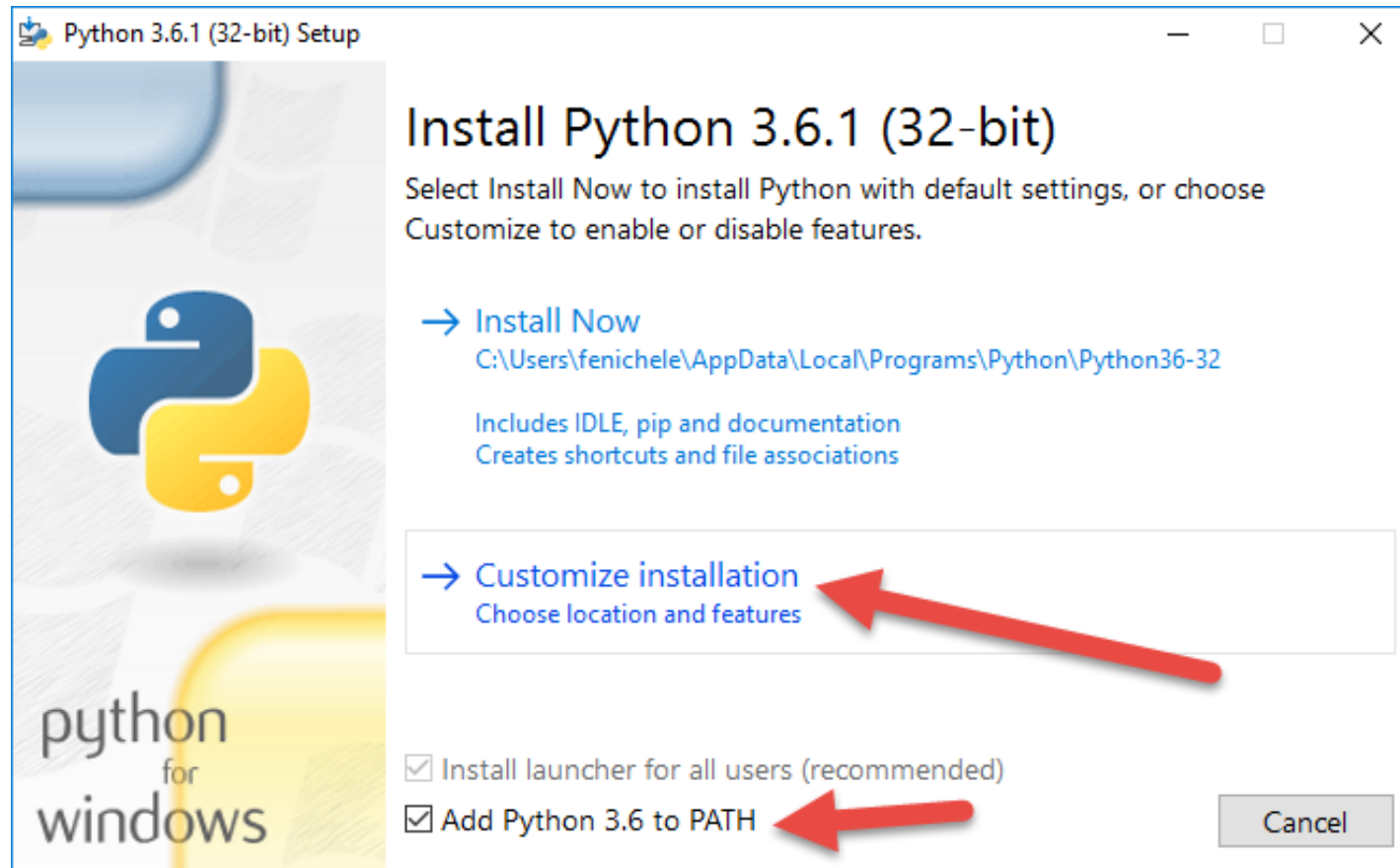


Image from
CodersEye.com
<https://coderseyeye.com/python-2-vs-python-3-version-differences>

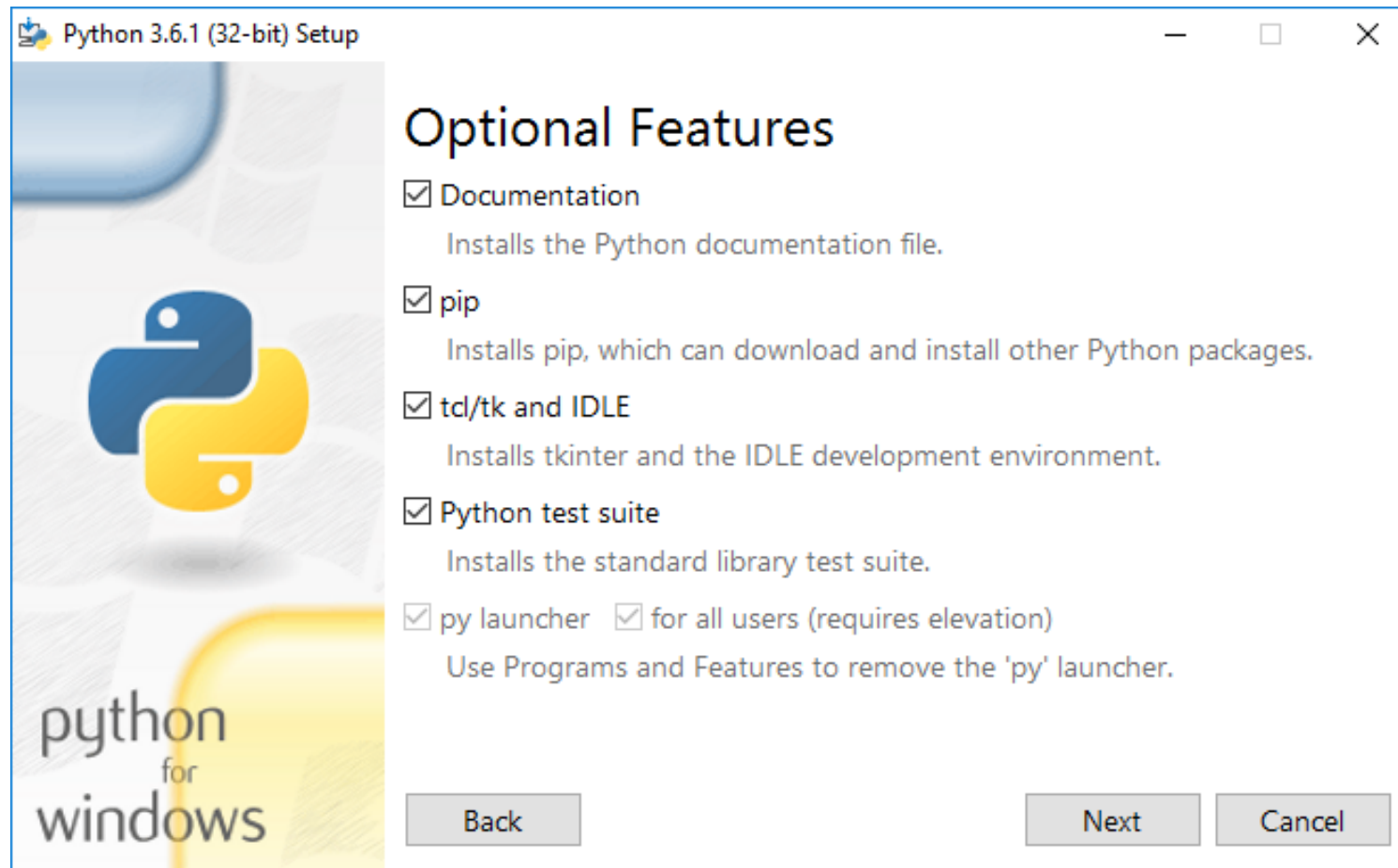
Pymarc in 30 Minutes: Installing Python

› Run the downloaded file



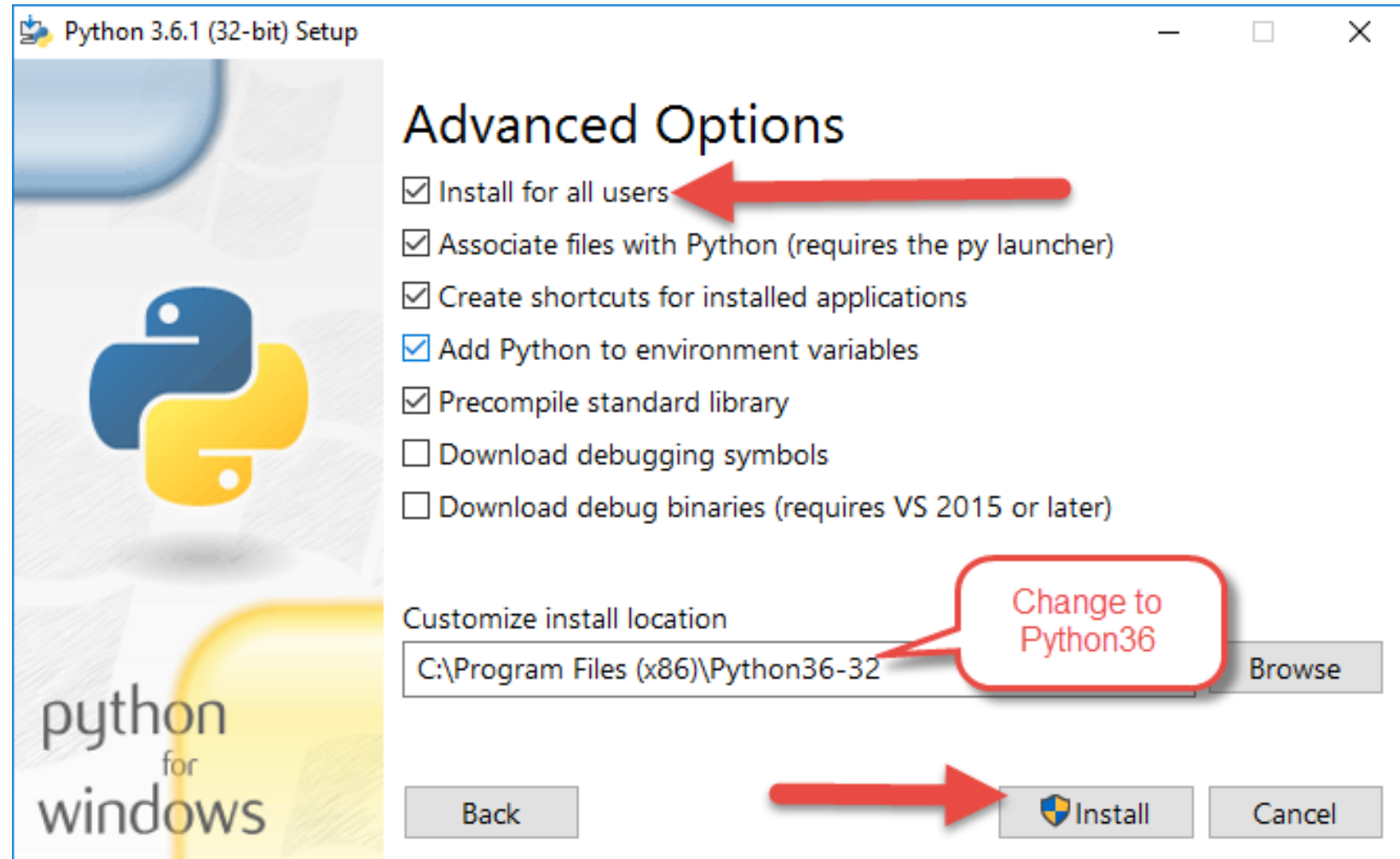
Pymarc in 30 Minutes: Installing Python

› Select all options on Optional Features



Pymarc in 30 Minutes: Installing Python

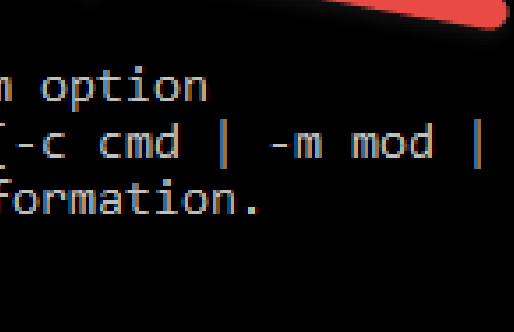
- › Install for all users
- › Change the location



Pymarc in 30 Minutes: Test the Installation

- › Open the command line
- › Type: “python -m”

 Administrator: Command Prompt

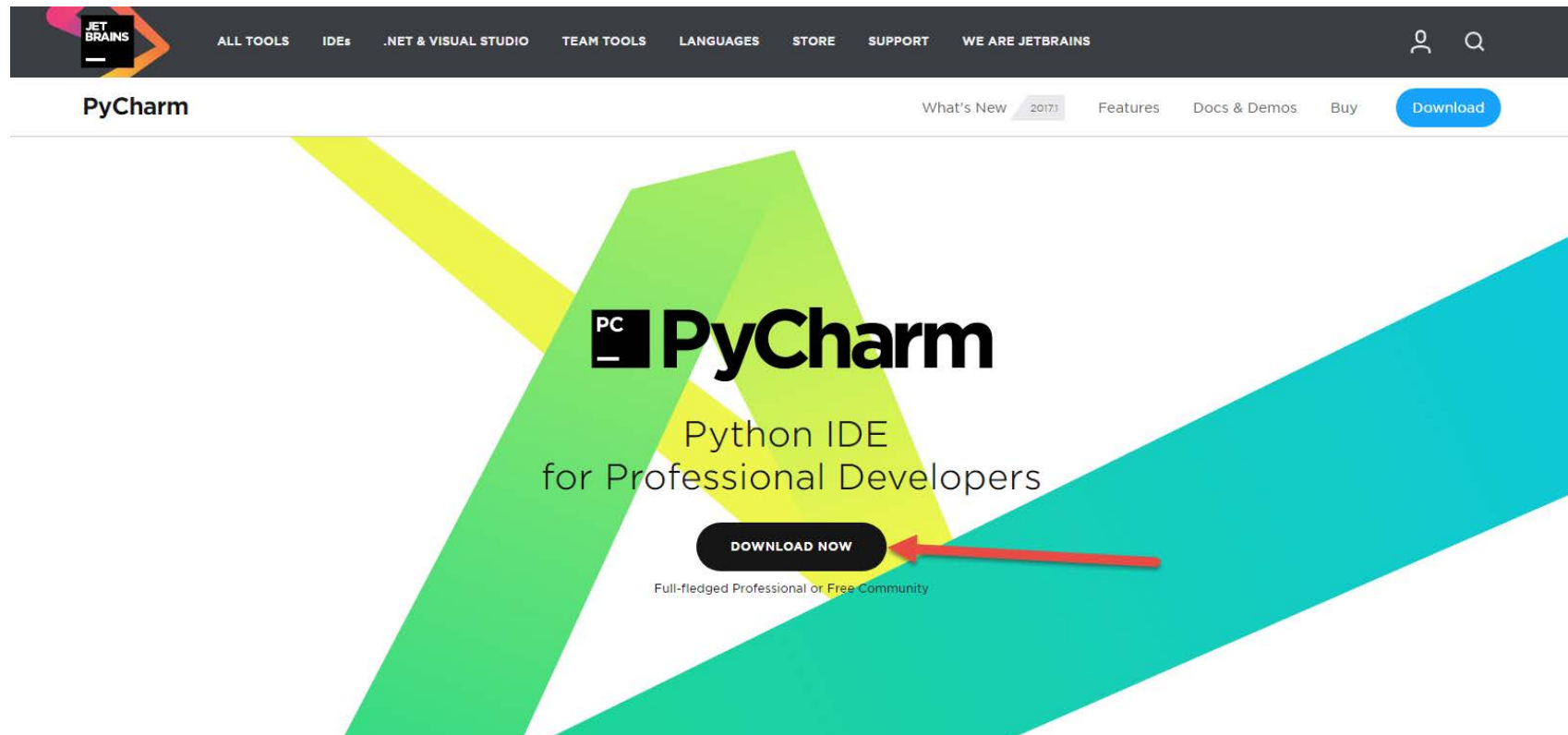


```
C:\>python -m
Argument expected for the -m option
usage: python [option] ... [-c cmd | -m mod | file | -] [arg] ...
Try `python -h' for more information.

C:\>
```

Pymarc in 30 Minutes: Install PyCharm


- › IDE == Integrated Development Environment
- › Python comes with IDLE



Pymarc in 30 Minutes: Install PyCharm

PyCharm

What's New 2017.1 Features Docs & Demos Buy **Download**



Version: 2017.1.1
Build: 171.4163.6
Released: April 11, 2017

[System requirements](#)
[Installation Instructions](#)
[Previous versions](#)

Download PyCharm

Windows macOS Linux

Professional

Full-featured IDE
for Python & Web
development

DOWNLOAD


Free trial


Community

Lightweight IDE
for Python & Scientific
development

DOWNLOAD

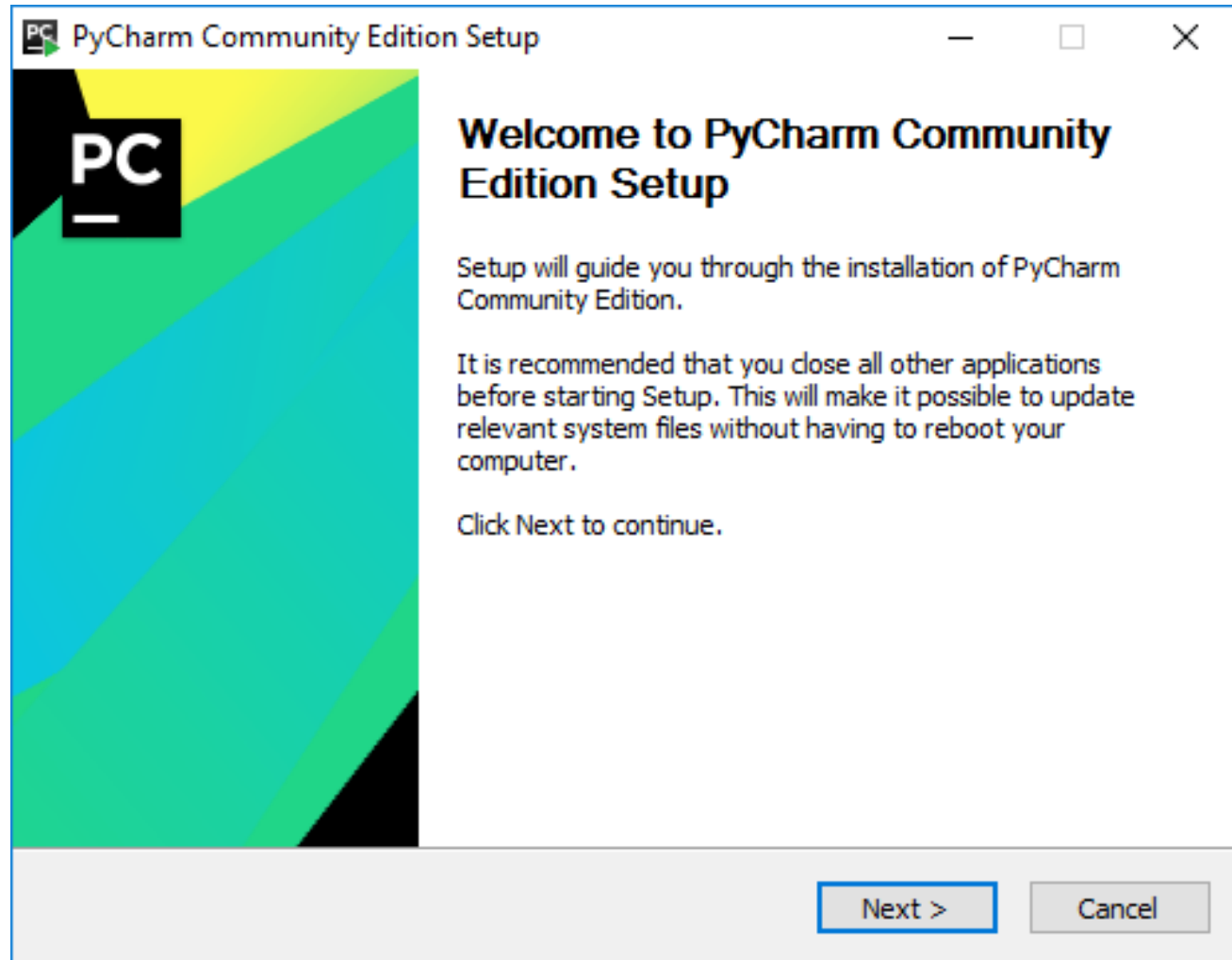
Free, open-source



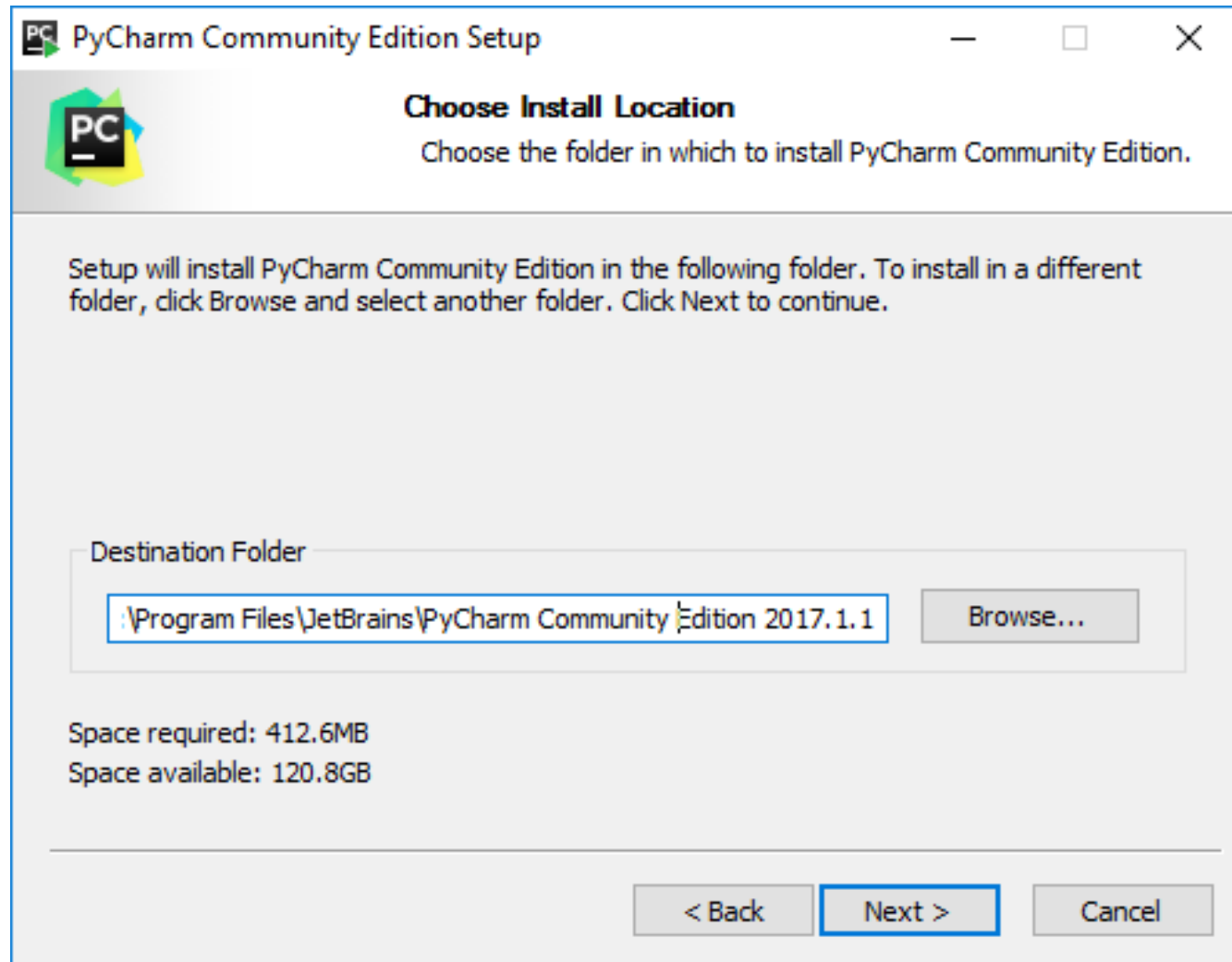


Get the **ToolBox App** to download PyCharm and its future updates with ease

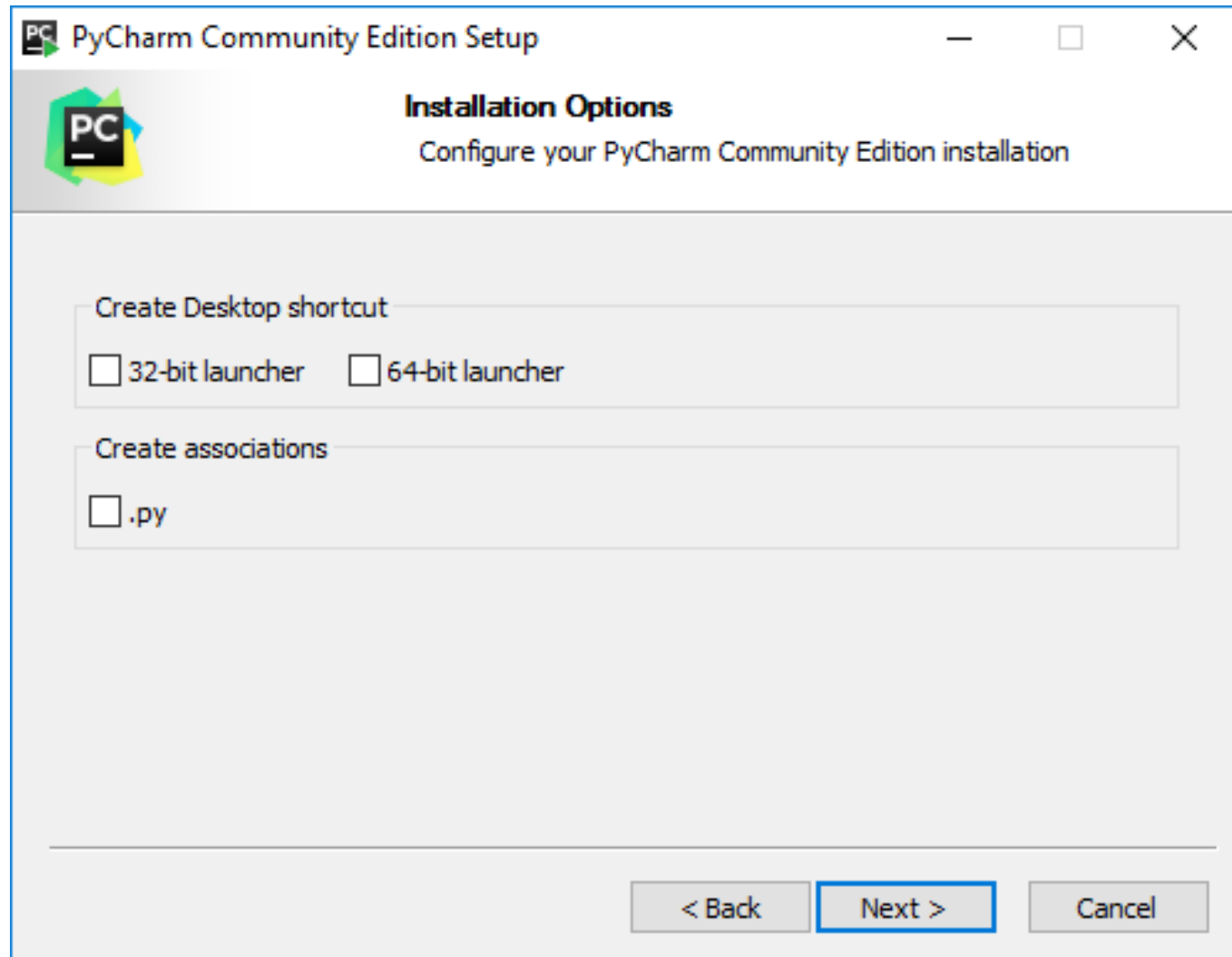
Pycharm in 30 Minutes: Install PyCharm



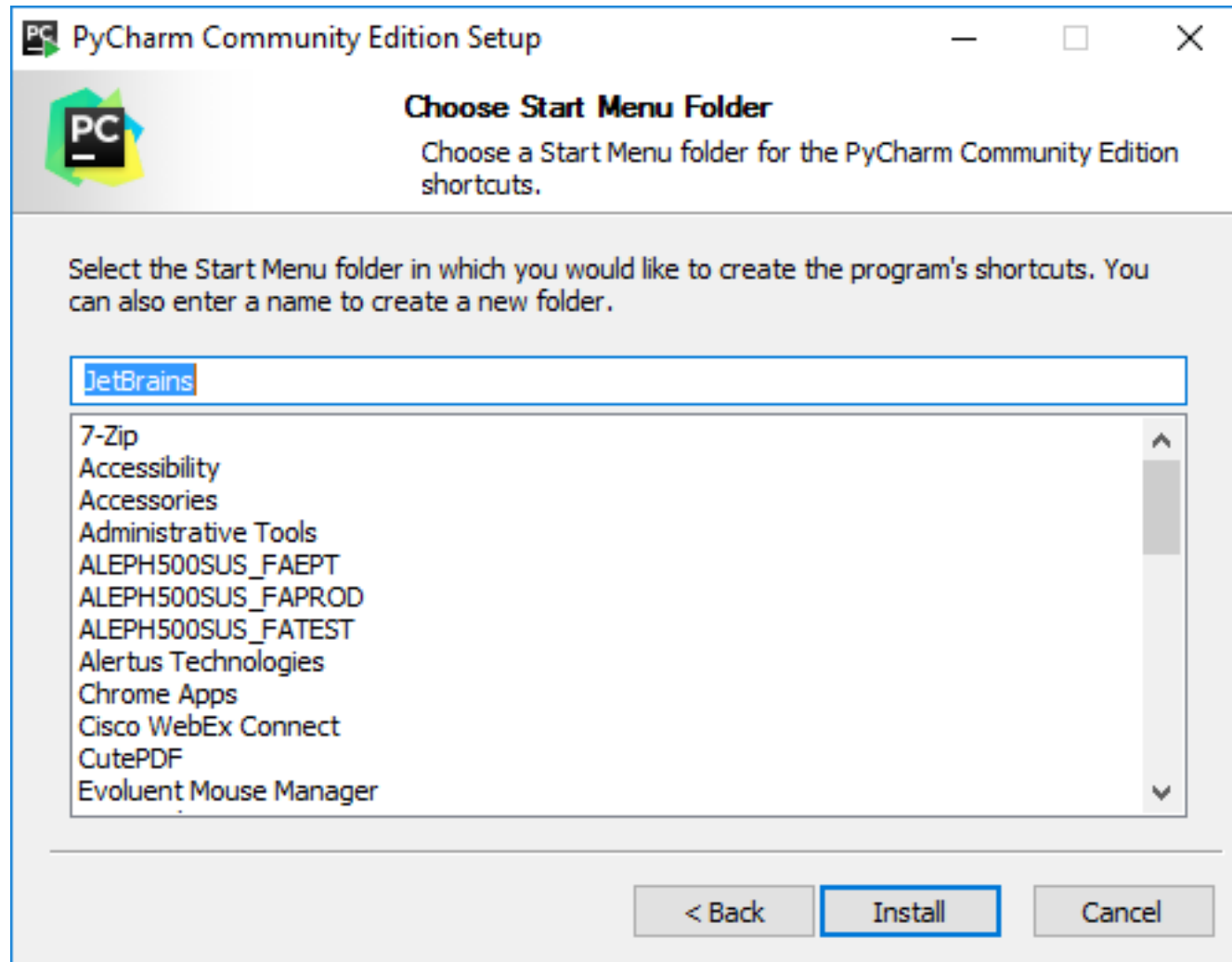
Pycharm in 30 Minutes: Install PyCharm



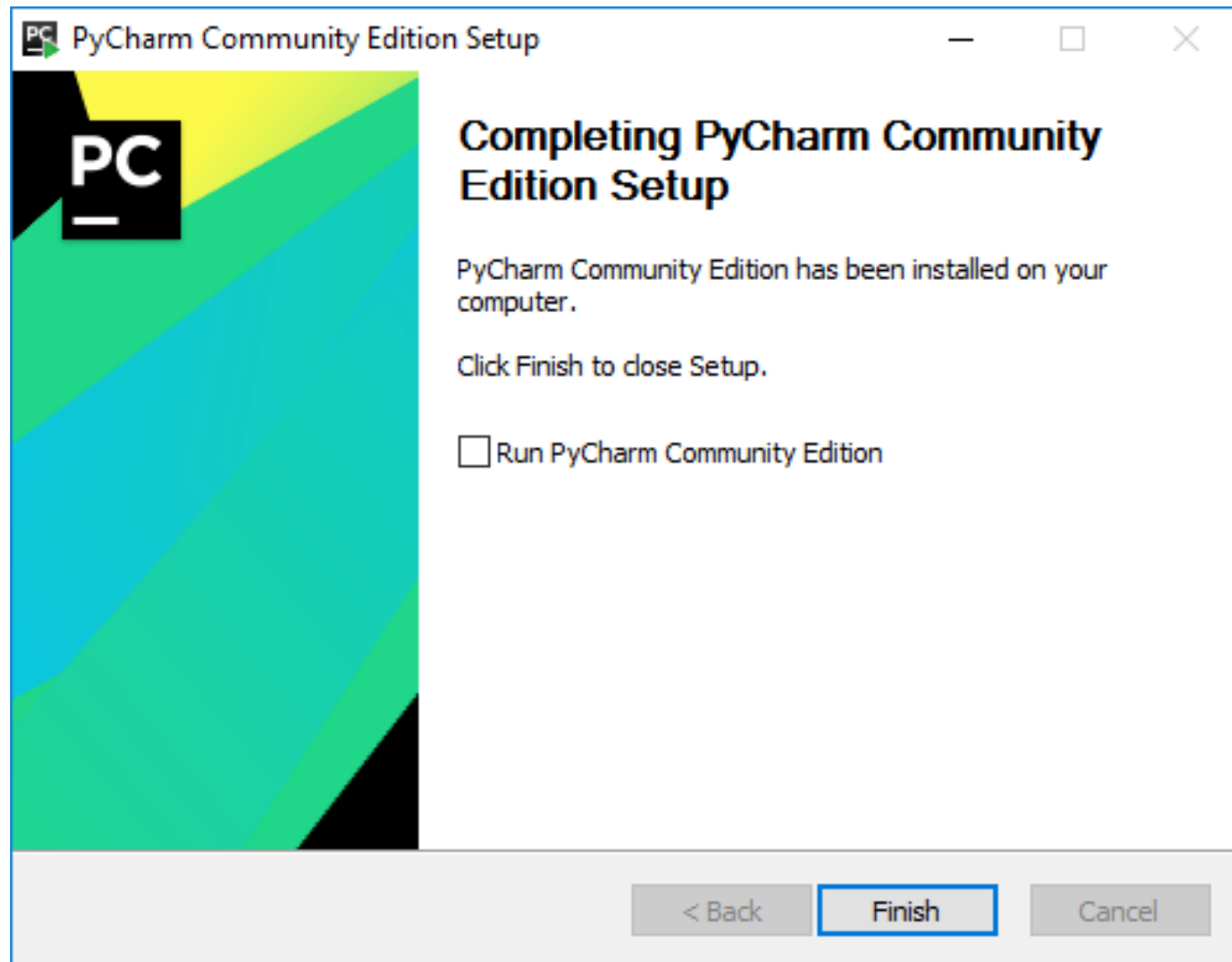
Pycharm in 30 Minutes: Install PyCharm



Pycharm in 30 Minutes: Install PyCharm

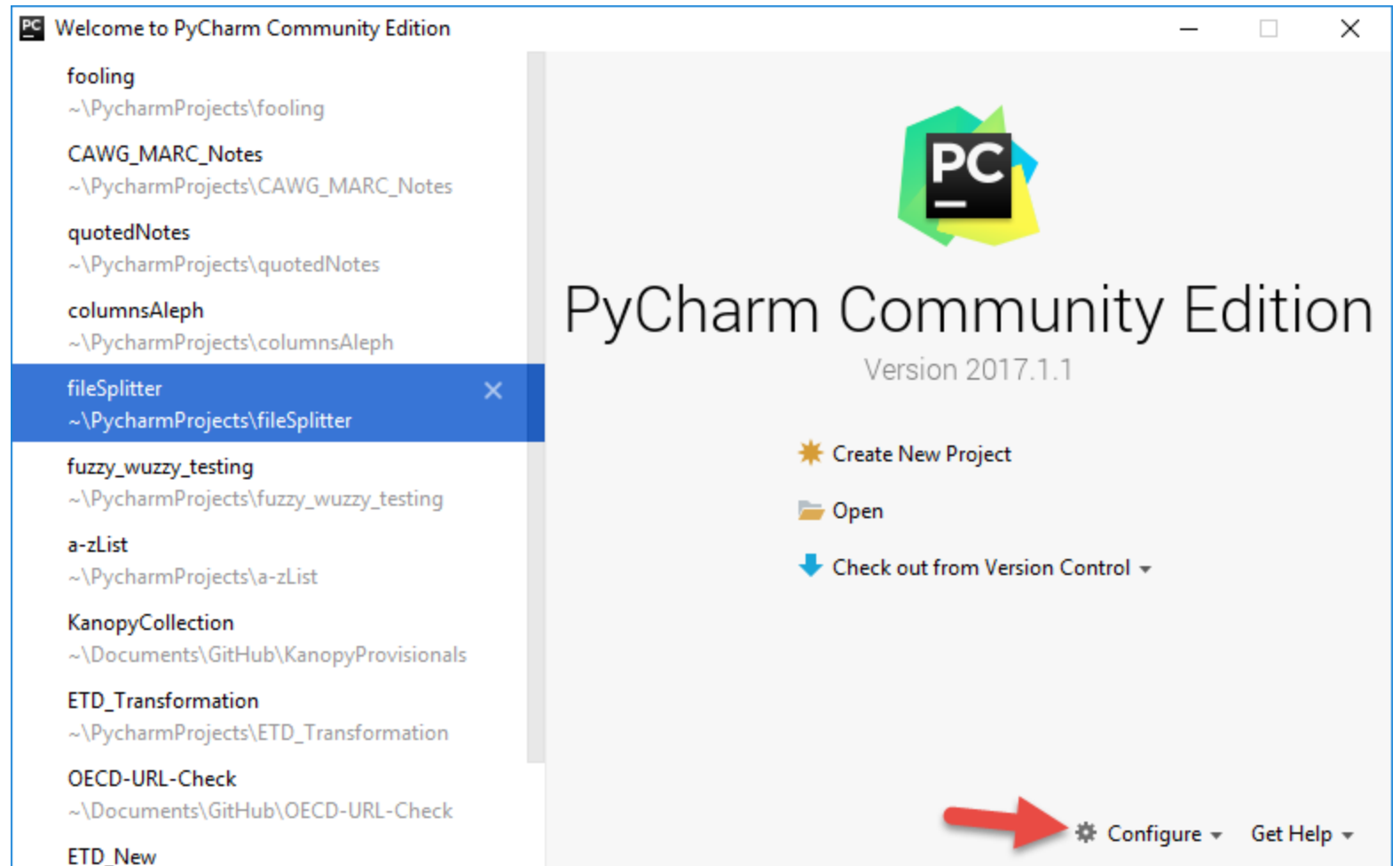


Pycharm in 30 Minutes: Install PyCharm



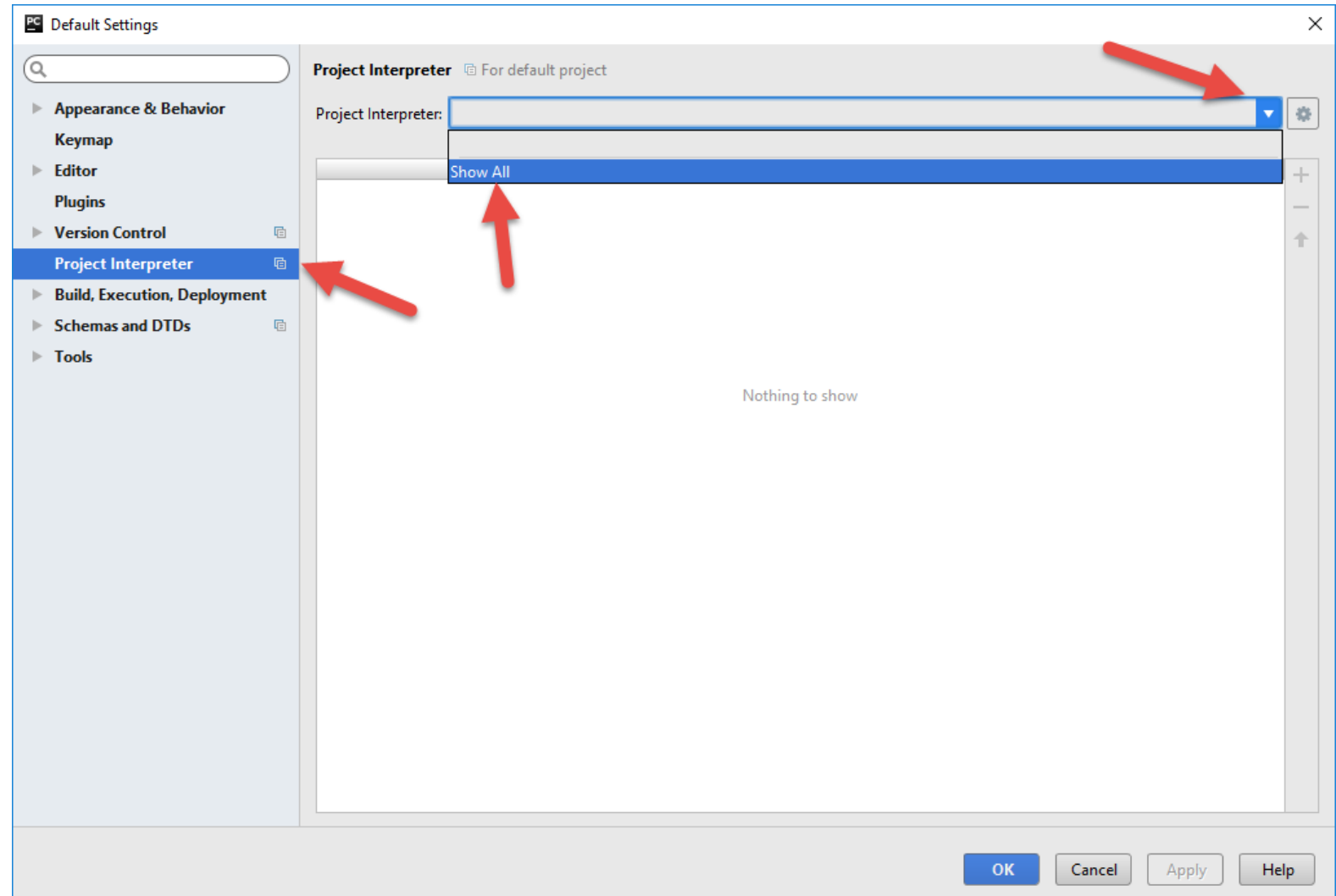
Pycharm in 30 Minutes: Configure PyCharm

- › Go to Configure
- › You won't have all the projects on the left



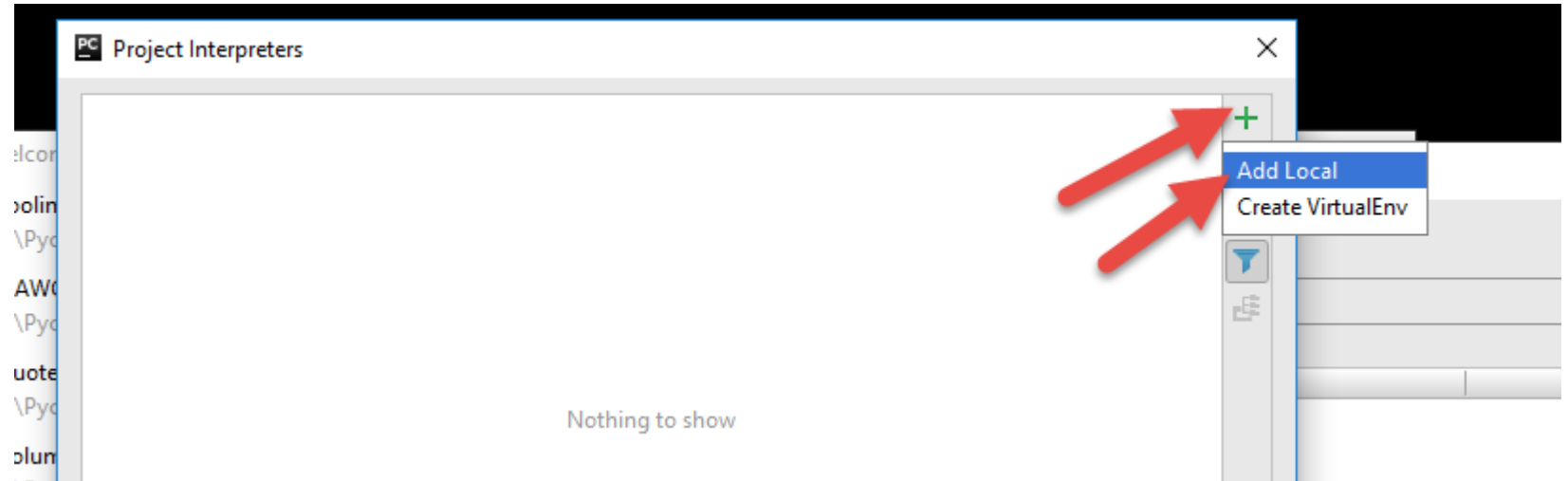
Pymarc in 30 Minutes: Configure PyCharm

- › Select project interpreter
- › Select the dropdown
- › Select the “Show All”



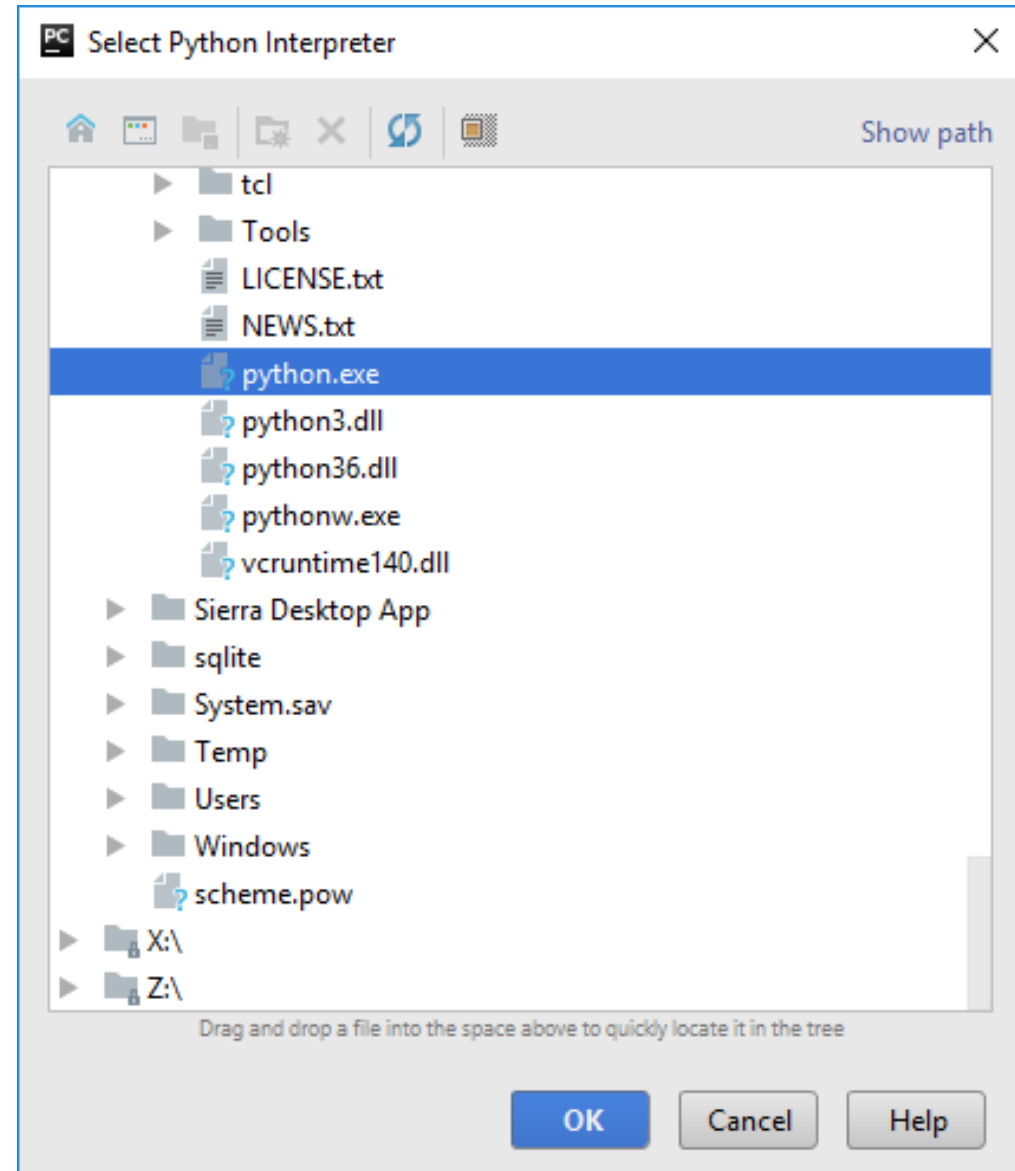
Pymarc in 30 Minutes: Configure PyCharm

- › Click the green plus sign
- › Select Add Local

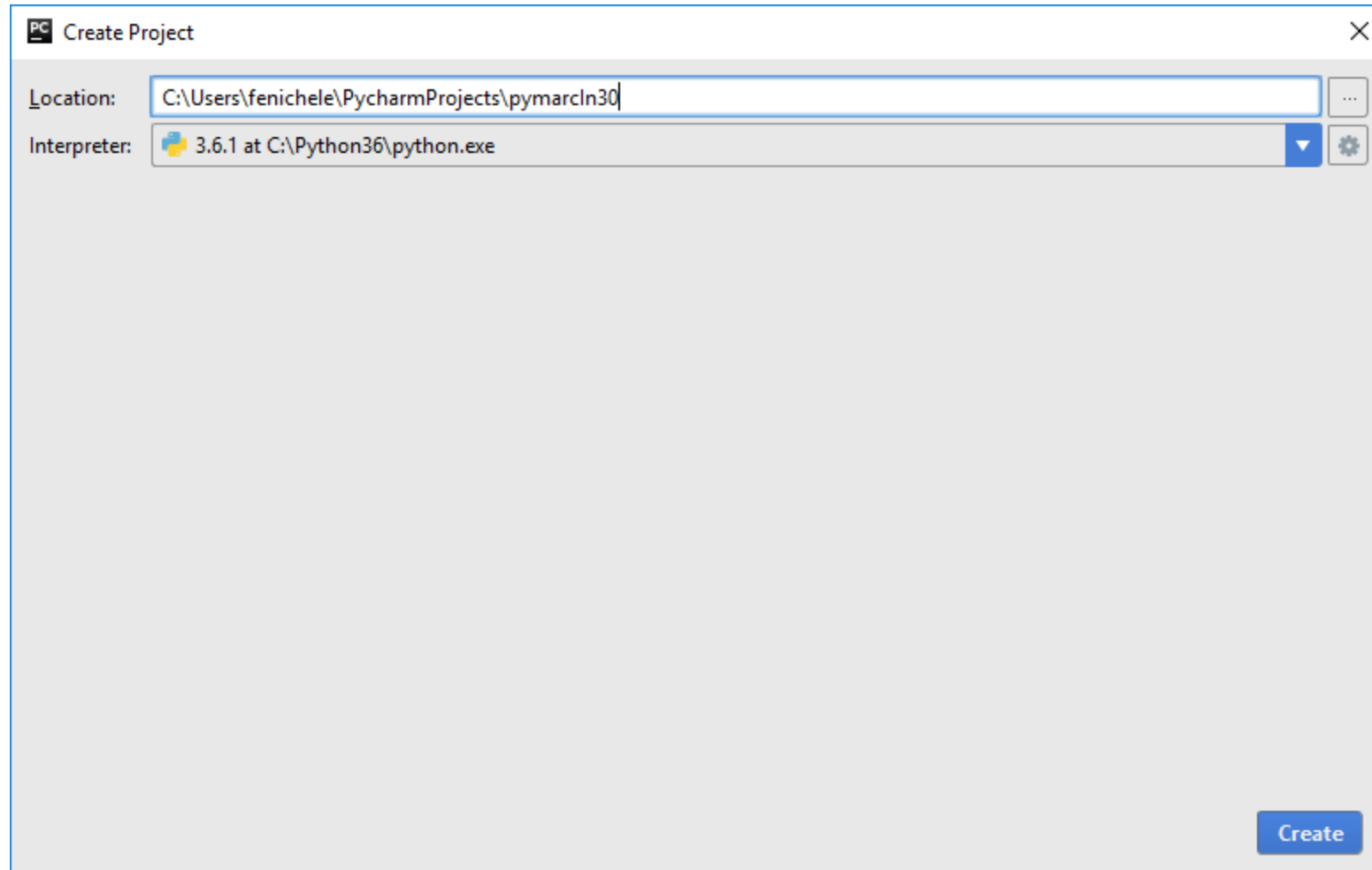


Pycharm in 30 Minutes: Configure PyCharm

- › Select the python.exe that we just installed



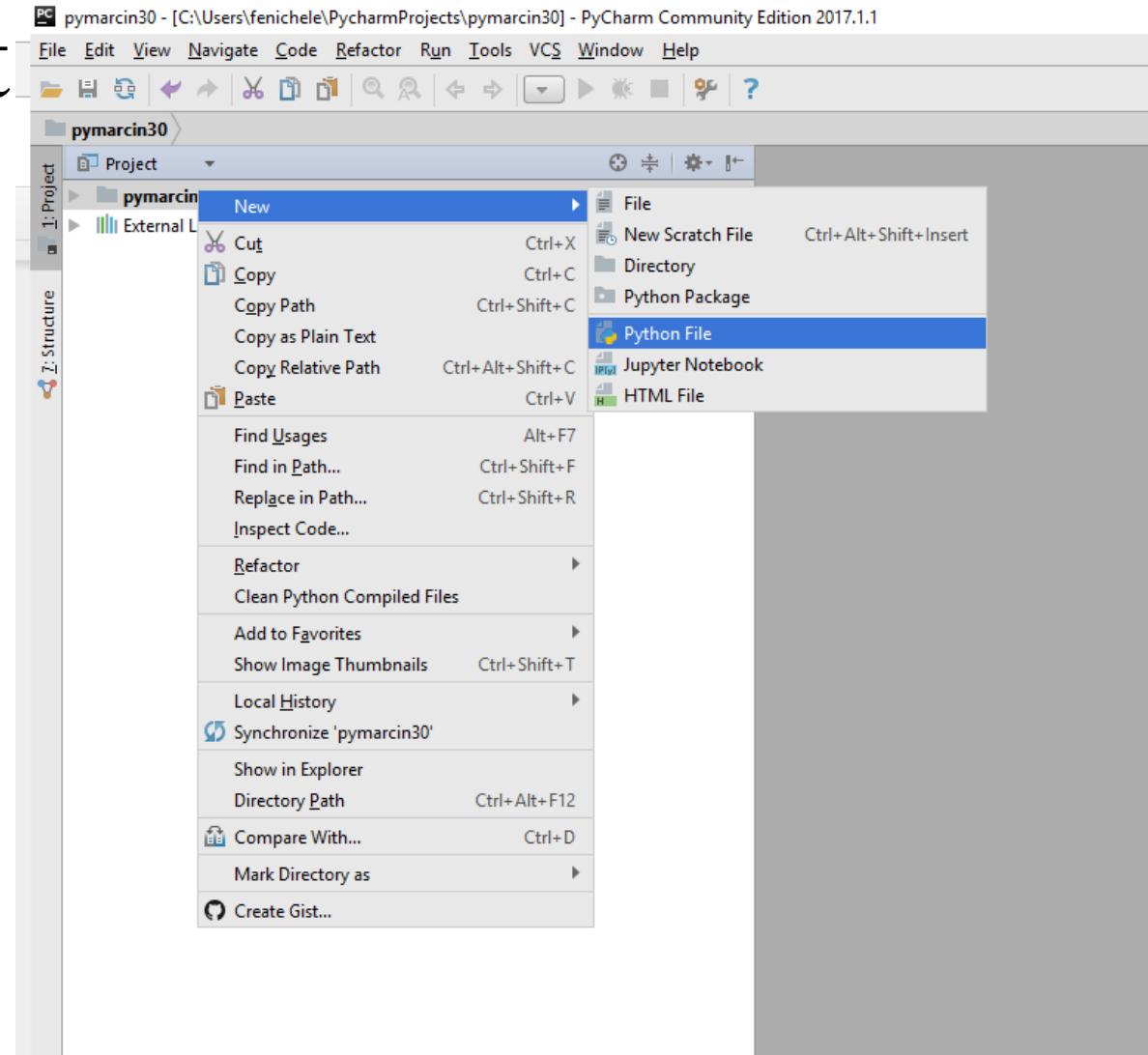
Pymarc in 30 Minutes: PyCharm – First Project



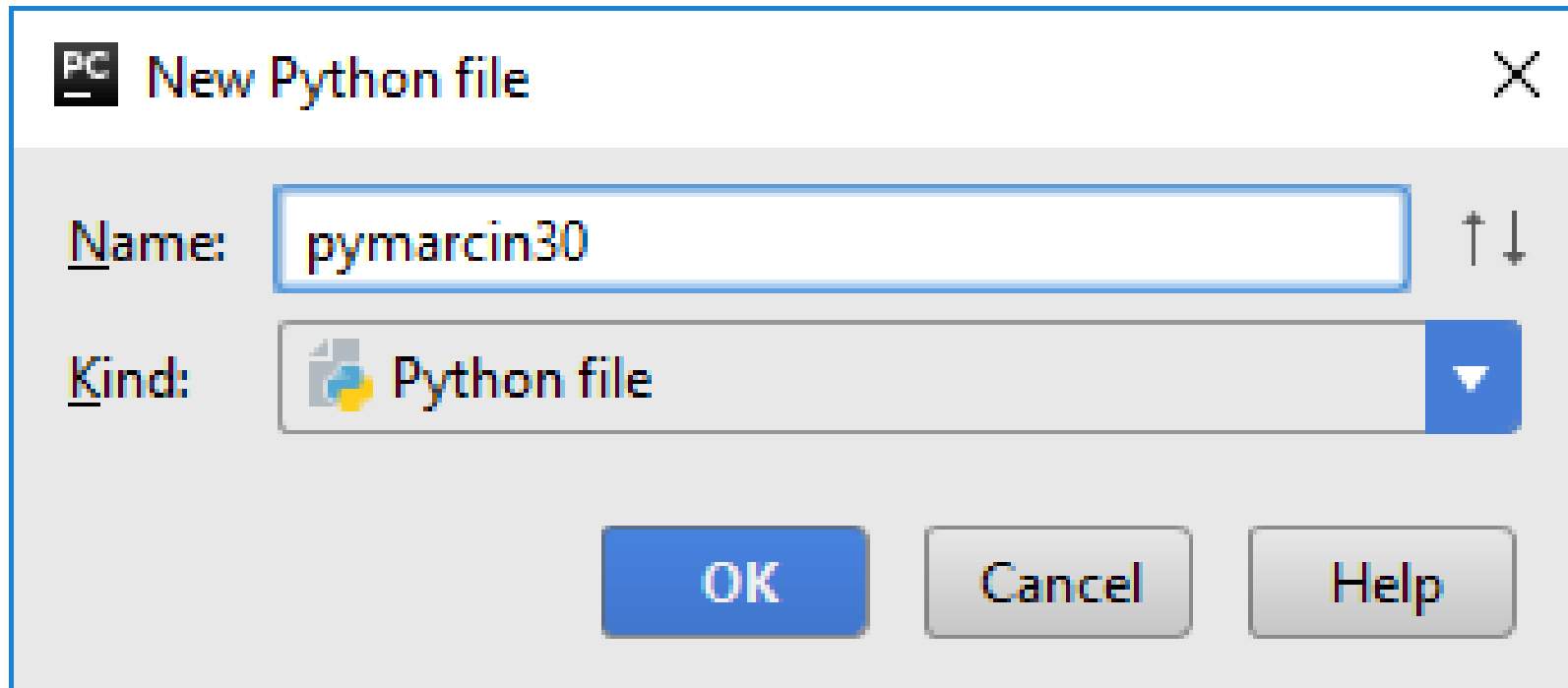
Pymarc in 30 Minutes:

PyCharm – First Project

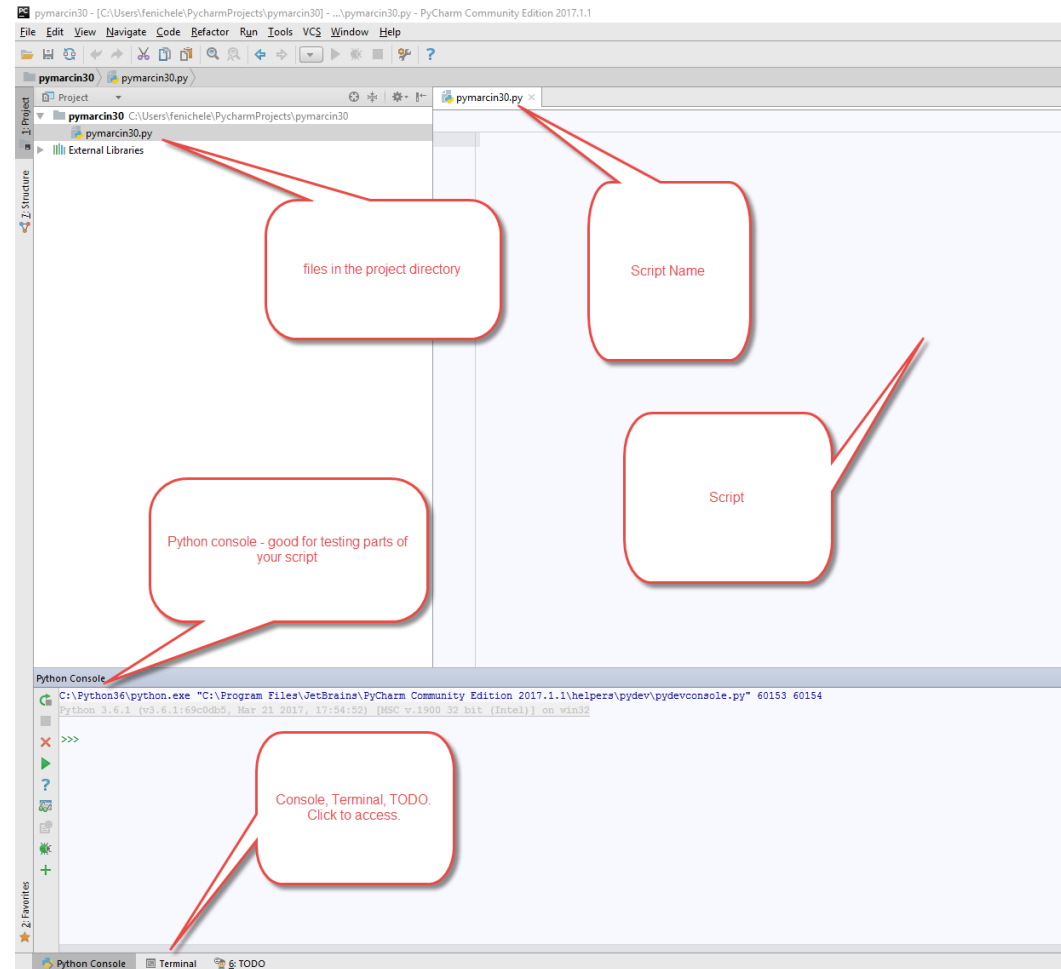
- › To add a .py file:
- › Right click on the project directory and select New Python File.



Pymarc in 30 Minutes: PyCharm – First Project



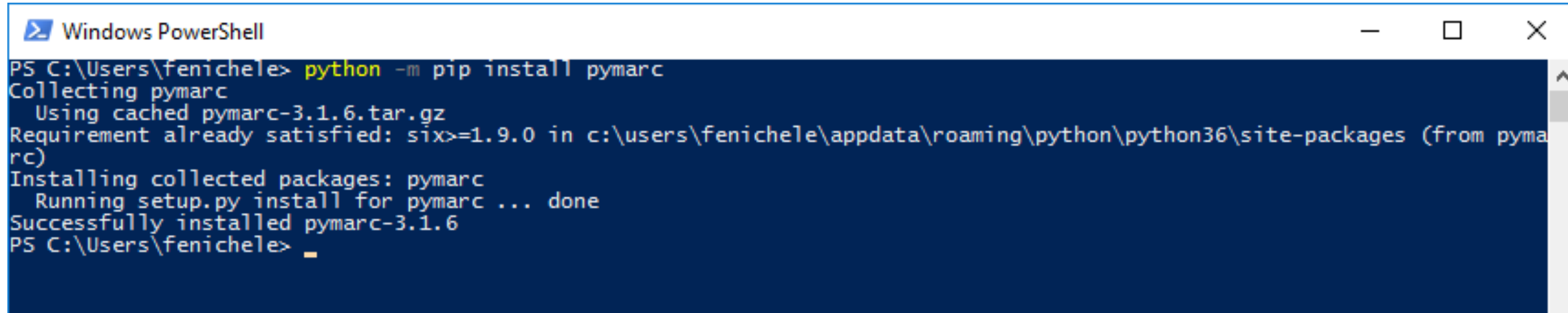
Pymarc in 30 Minutes: PyCharm – Workspace Layout



Pymarc in 30 Minutes:

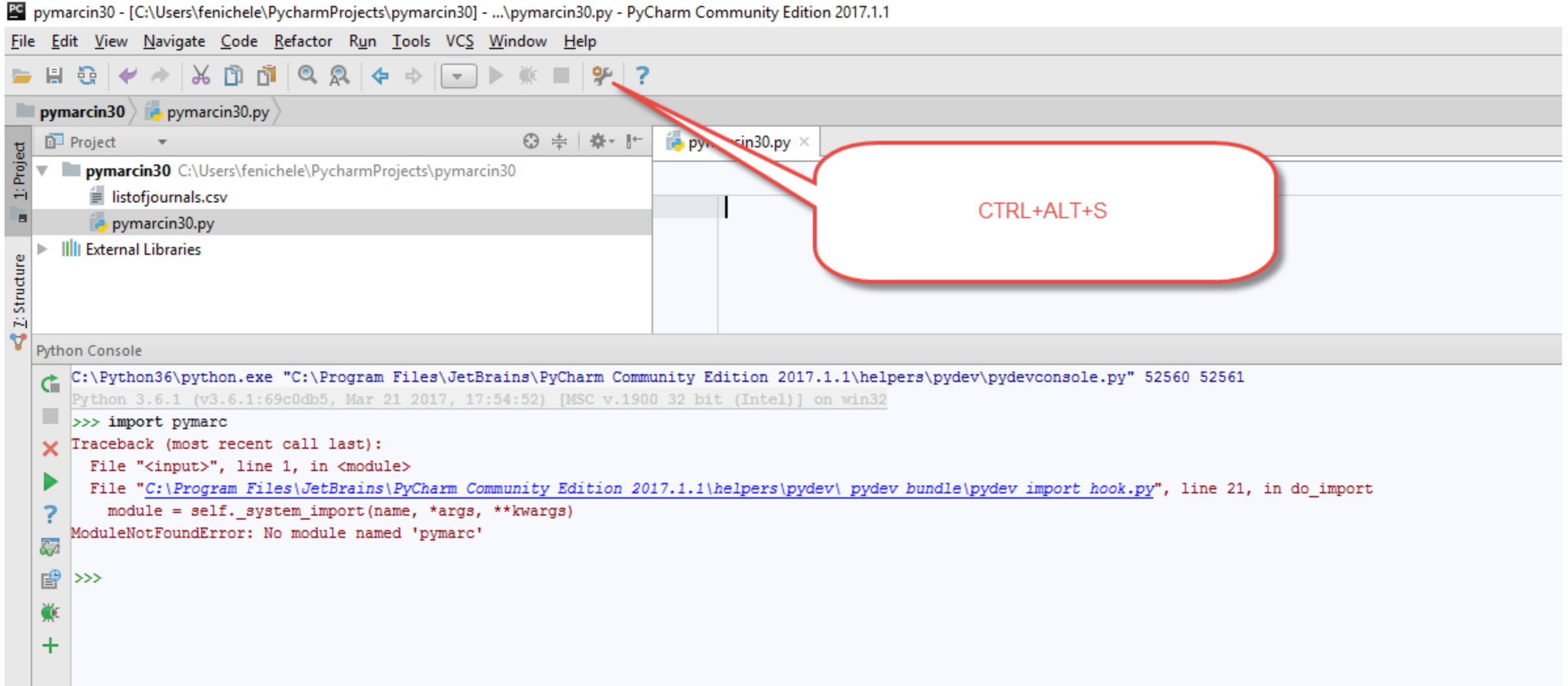
Installing pymarc with pip

- › Can use command line, python console, or Windows PowerShell
- › Python `-m pip install pymarc`



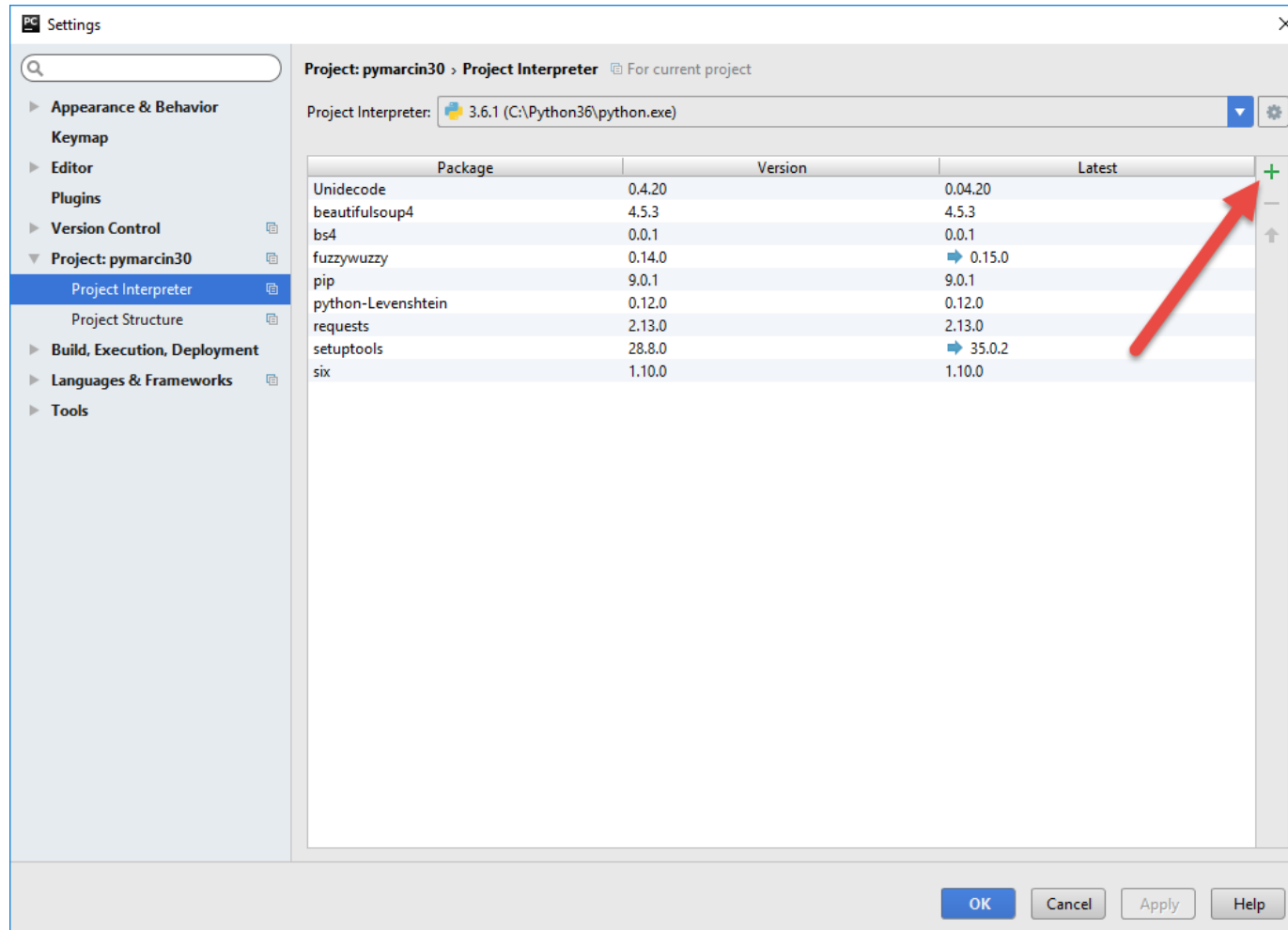
```
Windows PowerShell
PS C:\Users\fenichele> python -m pip install pymarc
Collecting pymarc
  Using cached pymarc-3.1.6.tar.gz
Requirement already satisfied: six>=1.9.0 in c:\users\fenichele\appdata\roaming\python\python36\site-packages (from pymarc)
Installing collected packages: pymarc
  Running setup.py install for pymarc ... done
Successfully installed pymarc-3.1.6
PS C:\Users\fenichele> _
```

Pymarc in 30 Minutes: Installing pymarc with PyCharm

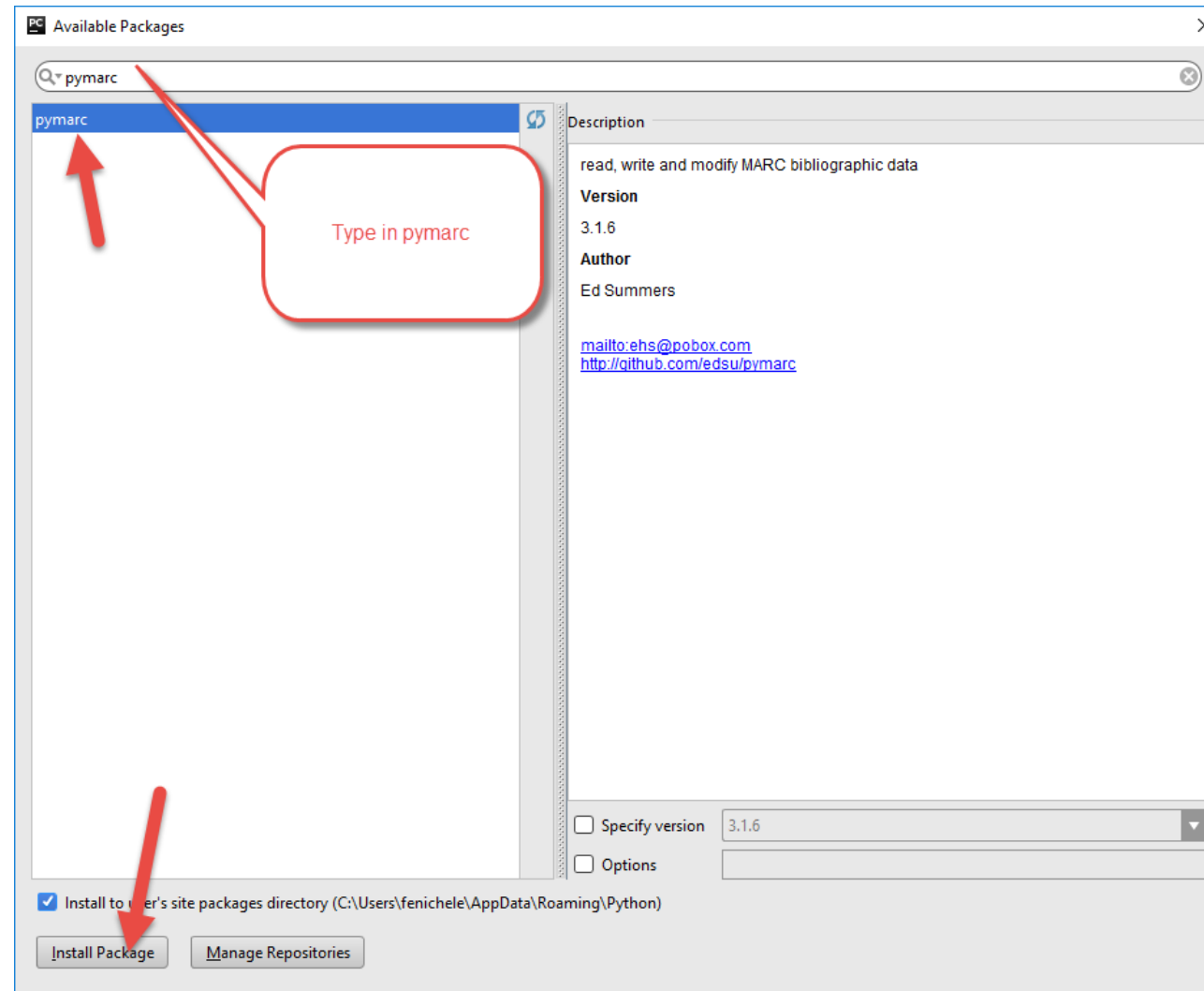


Pymarc in 30 Minutes:

Installing pymarc with PyCharm

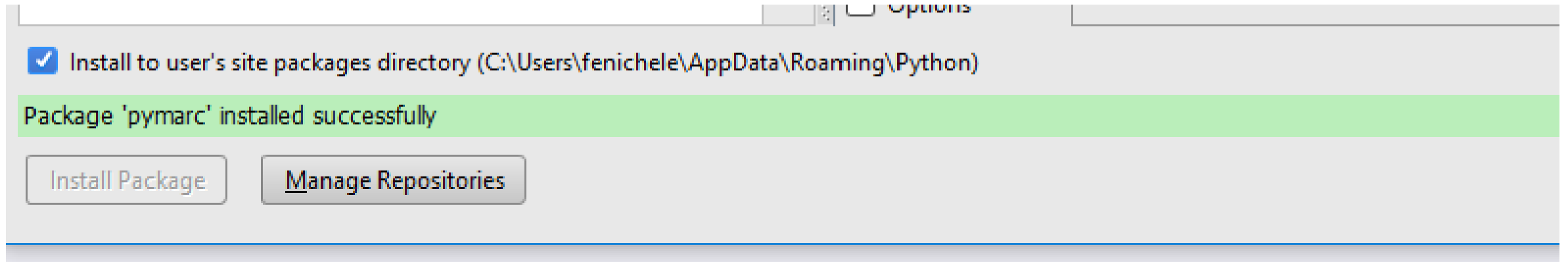


Pymarc in 30 Minutes: Installing pymarc with PyCharm



Pymarc in 30 Minutes:

Installing pymarc with PyCharm



Pymarc in 30 Minutes:

Writing scripts

› Let's go live to PyCharm!

Pymarc in 30 Minutes:

Additional Python Resources

- › Code Academy, Coursera, MIT, etc.
- › Check your library - I'll bet it has books on learning Python
- › Documentation
- › I almost always find what I need when I'm stuck with something on Stack Exchange.
- › Also, there is a Python Support Slack Channel on the Metadata Support Group Slack:

https://docs.google.com/forms/d/e/1FAIpQLSc3WCCi2_03rkbSwGVbE0rQwYFSxvL6THz6GRZY8HAbijaK4w/viewform

Pymarc in 30 Minutes:

Additional pymarc Resources

- › pymarc Discussion on Google Groups
- › Hacking in Python with PyMARC ACRL TechConnect Blog
(<http://acrl.ala.org/techconnect/post/hacking-in-python-with-pymarc>)
- › Augmenting the Cataloger's Bag of Tricks : Using MarcEdit, Python, and PyMARC for Batch-Processing MARC Records Generated From the Archivists' Toolkit
(<http://journal.code4lib.org/articles/8336>)
- › The librarian's introduction to programming languages a LITA guide, Chapter 2

Pymarc in 30 Minutes:

Additional Resources

- › GitHub (<https://github.com/EthanDF>)
 - › Creating MARC Theses and Dissertations records based on data from our digital library
 - › Doing reconciliation projects between my ILS and OCLC Records
 - › Batchloading error checks
 - › eBook access checks

Pymarc in 30 Minutes:

Final Thoughts

- › Should technical services librarians learn to code?
- › It is a privilege to have the time and opportunity to do so

PyMarc in 30 Minutes:

Sources Considered

- › Hacking in Python with PyMARC ACRL TechConnect Blog (<http://acrl.ala.org/techconnect/post/hacking-in-python-with-pymarc>)
- › Augmenting the Cataloger's Bag of Tricks : Using MarcEdit, Python, and PyMARC for Batch-Processing MARC Records Generated From the Archivists' Toolkit (<http://journal.code4lib.org/articles/8336>)
- › The librarian's introduction to programming languages a LITA guide, Chapter 2
- › pymarc Discussion Google Group
- › Workflow Automation in Technical Services: Part 2 (<http://acrl.ala.org/techconnect/post/workflow-automation-in-technical-services-part-2>)
- › Do Library Stuff Faster with Python (<http://acrl.ala.org/techconnect/post/do-library-stuff-faster-with-python>)
- › How to do common Excel and SQL tasks in Python (<http://code-love.com/2017/04/30/excel-sql-python/>)
- › How to Install Python on Windows (<https://www.howtogeek.com/197947/how-to-install-python-on-windows/>)
- › Python 3.6.1 documentation (<https://docs.python.org/3/>)