



Python for DevOps

LEARN FIERCELY EFFECTIVE AUTOMATION

Schedule

Part 1: Introduction to Python for DevOps (55 min)

Break (5 min)

Part 2: Automating Text and Filesystem (55 min)

Break (5 min)

Part 3: Developing with the Command Line (55 min)

Break (5 min)

Part 4: Continuous Integration and Delivery (55 min)

Part 1: Introduction to Python for DevOps (55 minutes)



Presentation: What is DevOps anyway?

Presentation: Procedural Statements

Presentation: Lists and Dictionaries

Exercise: Write a dictionary with a mutable key.

Presentation: Functions, Lazy Expressions, Async and Concurrency, IPython terminal

Exercise: Write a function that returns infinite random values

Exercise: Capture the output of a shell command using the `!` operator and parse with `SList` `grep`

Q&A

Poll - Experience Level With DevOps?

- Not familiar at all
- Somewhat familiar
- Very familiar

Poll - Experience Level With Python?

- Not familiar at all
- Somewhat familiar
- Very familiar

Poll - Experience Level with IPython?

- Not familiar at all
- Somewhat familiar
- Very familiar

Part 2: Automating Text and Filesystem (55 minutes)

Presentation: Reading, Writing and Using files: TXT, CSV, and YAML

Exercise: Read and Write a YAML file

Presentation: Managing files and directories using `os.path` and `pathlib`

Exercise: Use `pathlib` to rename files

Presentation: Walking directory trees using `os.walk`

Presentation: Getting stat information on files and directories

Presentation: Finding files: duplicates, globbing, and patterns

Exercise: Find files using `glob`

Q&A



Poll - Experience level with File I/O in Python?

- Not familiar at all
- Somewhat familiar
- Very familiar

Poll - Experience level with searching a file system in Python?

- Not familiar at all
- Somewhat familiar
- Very familiar

Part 3: Developing with the Command Line (55 minutes)

Poll: Experience level with VSCode?

Presentation: Setting up a Python project with VSCode and pip

Presentation: Using sys.argv

Exercise: Write a command-line tool with sys.argv

Presentation: Using click CLI Framework

Write a command-line tool with click



Poll - Experience level with VSCode?

- Not familiar at all
- Somewhat familiar
- Very familiar

Poll - Experience level with pip?

- Not familiar at all
- Somewhat familiar
- Very familiar

Part 4: Continuous Integration and Delivery (60 minutes)

Presentation: Creating Makefiles

Exercise: Create a Makefile

Presentation: Creating Python virtualenv

Exercise: Create and use virtualenv

Presentation: Linting and testing Python code with Pylint and PyTest

Exercise: Lint code with Pylint

Presentation: Configuring CircleCI Continuous Integration with Github

Exercise: Setup github repo to build with CircleCI

Presentation: What is Continuous Delivery?

Q&A



Poll - Experience with Pylint and Pytest?

- Not familiar at all
- Somewhat familiar
- Very familiar

Poll - Experience with CircleCI?

- Not familiar at all
- Somewhat familiar
- Very familiar

Poll - Experience with Continuous Integration and Delivery?

- Not familiar at all
- Somewhat familiar
- Very familiar

