

DATA STRUCTURES IN PYTHON

MATTOX BECKMAN

GET PROGRAM — JANUARY 4, 2022

OBJECTIVES

- Explain why we need different kinds of data structures.
- Explore four common data structures:
 - Lists
 - Tuples
 - Hashmaps
 - Sets
- Install Jupyter (and Anaconda and Seaborn) on your own computers

ABOUT ME

Name

Mattox Beckman

Education

PhD UIUC in 2003

Previous Work

IIT Chicago 2003 – 2015

Research Interests

CS Education, Programming Languages

Hobbies

Fermentation, Meditation, Paduk, Irish Music

SCENARIO

Your professor hires you to organize a stack of 10,000 exams. Once in a while you will be asked to retrieve some of these exams. Your pay will be \$10 per exam, but you lose one dollar for each minute that passes before you return the exam.

Question: How do you organize these exams?

SCENARIO

Your professor hires you to organize a stack of 10,000 exams. Once in a while you will be asked to retrieve some of these exams. Your pay will be \$10 per exam, but you lose one dollar for each minute that passes before you return the exam.

Question: How do you organize these exams?

The way you organize your data impacts the kinds of questions you can ask about it!

LET'S GET JUPYTER

- I will use Jupyter Lab Notebooks for this lecture and next.
- You can install it yourself via <https://jupyter.org/install.html>
- But we will use **Binder** to host the examples.



Installing Jupyter Software

Get up and running with JupyterLab or the classic Jupyter Notebook.

Getting started with
JupyterLab

Today's Notebook is at

<https://github.com/mattoxb/get-ds-jan2022>