

# DSC 80 Discussion

Dylan Stockard



# Hi I'm Dylan!

- Seattle native
- 2nd year MS in Data Science
- MMA, hiking, road trips



What not to do at the Grand Canyon

# Your Turn!

Name

Hometown

Hobby(s)

Favorite building or art installation on campus

# Discussion Overview

## Usual Discussion

- Go over the prior week's lab
- Discuss learning objectives of the lab
- Explore different implementations of the solution.

After discussion, a reflection form is available on Gradescope to be completed by midnight.

0.25% of extra credit will be awarded to those who submit the lab, attend discussion section, *and* complete the reflection form.

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## Today's Discussion

- Introductions
- Command line/terminal crash course

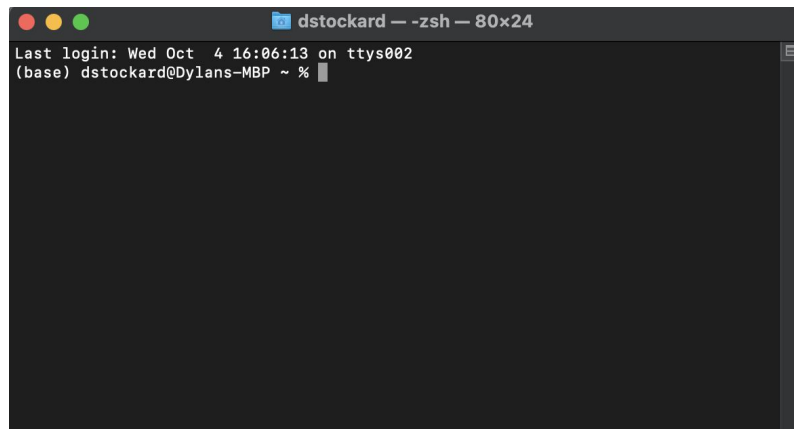
PLEASE try to set up your environment ASAP

Instructions under the “Tech Support” page of the course website

# Command Line/Prompt/Terminal

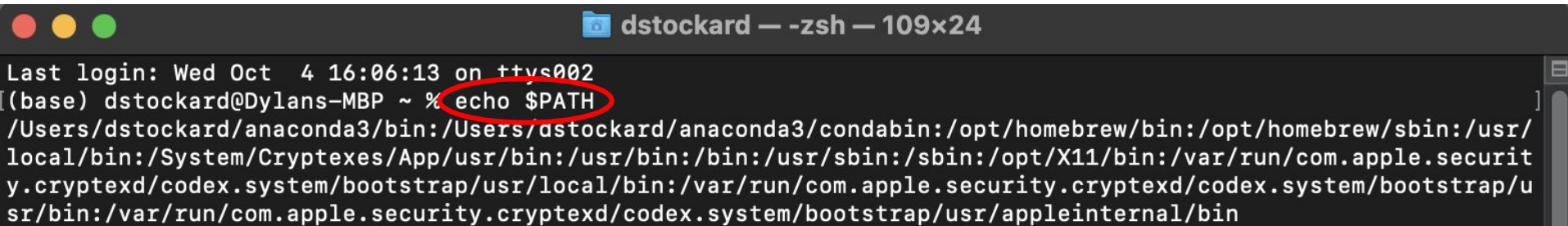
A way to talk with your computer to manage files, run scripts, and more!

We will not be testing you on your skills here, but you may need them for logistics in this class.



# What is a PATH?

A list of directories that tells your system where to run executables from

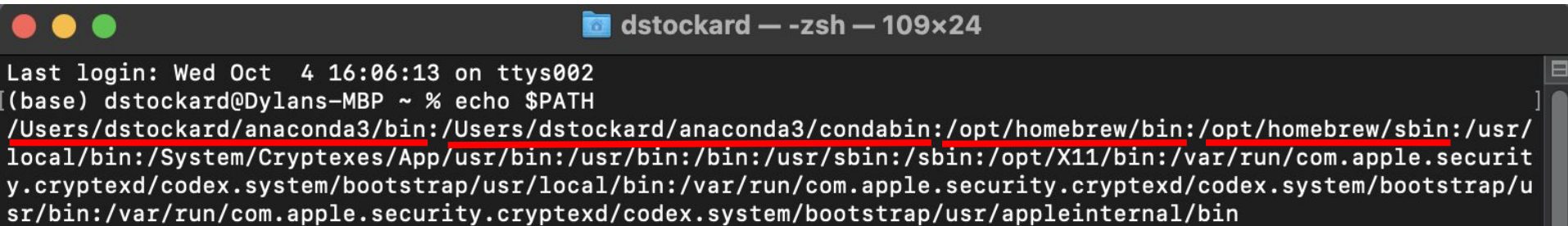


```
dstockard — -zsh — 109x24
Last login: Wed Oct  4 16:06:13 on ttys002
(base) dstockard@Dylans-MBP ~ % echo $PATH
/Users/dstockard/anaconda3/bin:/Users/dstockard/anaconda3/condabin:/opt/homebrew/bin:/opt/homebrew/sbin:/usr/local/bin:/System/Cryptexes/App/usr/bin:/usr/bin:/bin:/usr/sbin:/sbin:/opt/X11/bin:/var/run/com.apple.security.cryptexd/codex.system/bootstrap/usr/local/bin:/var/run/com.apple.security.cryptexd/codex.system/bootstrap/usr/bin:/var/run/com.apple.security.cryptexd/codex.system/bootstrap/usr/appleinternal/bin
```

The image shows a macOS terminal window with a dark background. The title bar at the top indicates the window is titled "dstockard — -zsh — 109x24". The terminal content shows the user's last login time and the command `echo $PATH` being executed. The output of the command is a long string of directory paths separated by colons, including `/Users/dstockard/anaconda3/bin`, `/opt/homebrew/bin`, and `/usr/local/bin`. The command `echo $PATH` is circled in red in the original image.

# What is a PATH?

A list of directories that tells your system where to run executables (like pip) from

A screenshot of a macOS terminal window. The title bar shows three colored window control buttons (red, yellow, green) on the left, a folder icon, and the text "dstockard — -zsh — 109x24". The terminal content shows the last login time and the command to echo the PATH environment variable. The output is a long string of directory paths, with the first three paths underlined in red. The paths are: /Users/dstockard/anaconda3/bin, /Users/dstockard/anaconda3/condabin, and /opt/homebrew/bin. The full output string is: /Users/dstockard/anaconda3/bin:/Users/dstockard/anaconda3/condabin:/opt/homebrew/bin:/opt/homebrew/sbin:/usr/local/bin:/System/Cryptexes/App/usr/bin:/usr/bin:/bin:/usr/sbin:/sbin:/opt/X11/bin:/var/run/com.apple.security.cryptexd/codex.system/bootstrap/usr/local/bin:/var/run/com.apple.security.cryptexd/codex.system/bootstrap/usr/bin:/var/run/com.apple.security.cryptexd/codex.system/bootstrap/usr/appleinternal/bin.

```
Last login: Wed Oct  4 16:06:13 on ttys002
(base) dstockard@Dylans-MBP ~ % echo $PATH
/Users/dstockard/anaconda3/bin:/Users/dstockard/anaconda3/condabin:/opt/homebrew/bin:/opt/homebrew/sbin:/usr/
local/bin:/System/Cryptexes/App/usr/bin:/usr/bin:/bin:/usr/sbin:/sbin:/opt/X11/bin:/var/run/com.apple.securit
y.cryptexd/codex.system/bootstrap/usr/local/bin:/var/run/com.apple.security.cryptexd/codex.system/bootstrap/u
sr/bin:/var/run/com.apple.security.cryptexd/codex.system/bootstrap/usr/appleinternal/bin
```



Dylan



```
pip install -r requirements.txt
```

Laptop



```
/Users/dstockard/anaconda3/bin:/Users/dstockard/anaconda3/condabin:/opt/homebrew/bin:/opt/homebrew/sbin:/usr/local/bin:/System/Cryptexes/App/usr/bin:/usr/bin:/bin:/usr/sbin:/sbin:/opt/X11/bin:/var/run/com.apple.security.cryptexd/codex.system/bootstrap/usr/local/bin:/var/run/com.apple.security.cryptexd/codex.system/bootstrap/usr/bin:/var/run/com.apple.security.cryptexd/codex.system/bootstrap/usr/appleinternal/bin
```

Laptop



```
:/Users/dstockard/anaconda3/bin/pip
```

Note: You can see where the first executable in your path is by prompting “which {executable name}”

# Environments

Python has a lot of useful libraries that make life easier...

- Numpy
- Pandas
- Matplotlib

These libraries are constantly updating, but not at the same time.

However, these libraries often rely on certain versions of one another.

We use a specific versions for this class so our code is all consistent.

### **Base environment**

Python 3.11.5

Numpy 1.24.3

Matplotlib 3.7.2



CONDA  
ACTIVATE/  
DEACTIVATE

### **DSC80 environment**

Python 3.8.18

Numpy 1.21.2

Matplotlib 3.5.1



# DSC80 Environment PATH

```
(base) dstockard@Dylans-MBP ~ % conda activate dsc80
(dsc80) dstockard@Dylans-MBP ~ % echo $PATH
/Users/dstockard/anaconda3/envs/dsc80/bin:/Users/dstockard/anaconda3/condabin:/opt/homebrew/bin:/opt/homebrew/
/sbin:/usr/local/bin:/System/Cryptexes/App/usr/bin:/usr/bin:/bin:/usr/sbin:/sbin:/opt/X11/bin:/var/run/com.ap
ple.security.cryptexd/codex.system/bootstrap/usr/local/bin:/var/run/com.apple.security.cryptexd/codex.system/
bootstrap/usr/bin:/var/run/com.apple.security.cryptexd/codex.system/bootstrap/usr/appleinternal/bin
```

# DSC8o Environment PATH

```
(base) dstockard@Dylans-MBP ~ % conda activate dsc80
(dsc80) dstockard@Dylans-MBP ~ % echo $PATH
/Users/dstockard/anaconda3/envs/dsc80/bin:/Users/dstockard/anaconda3/condabin:/opt/homebrew/bin:/opt/homebrew[
/sbin:/usr/local/bin:/System/Cryptexes/App/usr/bin:/usr/bin:/bin:/usr/sbin:/sbin:/opt/X11/bin:/var/run/com.ap
ple.security.cryptexd/codex.system/bootstrap/usr/local/bin:/var/run/com.apple.security.cryptexd/codex.system/
bootstrap/usr/bin:/var/run/com.apple.security.cryptexd/codex.system/bootstrap/usr/appleinternal/bin
```

Dsc8o environment PATH `/Users/dstockard/anaconda3/envs/dsc80/bin`

Base environment PATH `/Users/dstockard/anaconda3/bin`

```
/Users/dstockard/anaconda3/bin/pip
```



```
/Users/dstockard/anaconda3/envs/dsc80/bin
```

### Base environment

Python 3.11.5

Numpy 1.24.3

Matplotlib 3.7.2

CONDA  
ACTIVATE/  
DEACTIVATE

### DSC80 environment

Python 3.8.18

Numpy 1.21.2

Matplotlib 3.5.1



## Quick note...

This class distributes assignments and lecture notebooks through our github repository

dsc80-2023-fa

To set up, run

```
git clone https://github.com/dsc-courses/dsc80-2023-fa
```

To get new material that we release, cd to dsc80-2023-fa and run

```
git pull
```

# Before you leave...

Go to [dsc80.com](https://dsc80.com) and follow the instructions on the “Tech Support” page to set up your environment.

You are good to go once you have ran the first cell of lab 1 and have no errors

# Happy Friday!