EE16A Lab

Find a seat wherever!
Today’s Agenda

- Quick Poll
- About Us
- About Lab: Policies & Overview
- Account Forms
- Anaconda Installation
- Ipython Bootcamp
Survey Time!
About Us!
NAME - GSI

EMAIL

✗ Fun things
✗ Add pictures, make it friendly!
NAME- Lab ASE

✘ Fun things
✘ Add pictures, make it friendly!
Lab Logistics & Policies

- Go to your registered section.
- Work in groups of 2,3
- Arrive on time!
- Individual lab score is binary: complete / incomplete.
- **Free 16%** of your grade!
- Reiterate grading structure

- Buffer Weeks? What are those?
- Lab is for lab.
- Clean up after yourself.
- Use the Lab Machines.
- Aside from intro labs
- Do NOT touch/use equipment you are unfamiliar with!
- Help your peers!
Semester Outline

- Imaging Module
- Touchscreen Module
- Acoustic Positioning Module
“Lab is awesome! It inspired me to start more personal projects.”

-Fall ‘15 student
“I really enjoy lab because it’s the physical manifestation of lecture. Learning about something is one thing, but actually building it is much more rewarding.”

-A hands-on learner
“Even though my lab is at 8am, I always looks forward to going because it’s so much fun! It’s like breakfast...for your brain!”

-Actual 16A student...not kidding
Anaconda Installation

× Go to https://www.anaconda.com/download

× Download the Python 3.6 package for your OS.

× Follow the instructions for your OS on the Continuum website.

× Download iPython Test from the course website.

× Extract the zip file

× Open a terminal window and navigate to iPython Test. Run “jupyter notebook”, wait for the notebook to start, find the notebook you downloaded, open, and verify that it works.
Account Forms

✘ Go to: https://acropolis.cs.berkeley.edu/~account/webacct/

✘ Click on Login using your CALNET ID button.

✘ Click on Get new account button next to EE16A.

✘ EMAIL YOUR ACCOUNT FORM TO YOURSELF!
Opening Ipython Notebook

Mac / -nix: Open terminal and type “jupyter notebook”

Windows: Search for “Anaconda Prompt” and then type “Jupyter notebook”
**Notes**

- **Installing on Mac**
  - Install to Macintosh HD and not just "for me"

- **Installing on GNU/Linux**
  - Choose to automatically append the path names

- **Windows**
  - Open “Anaconda Command Prompt” and type in “jupyter notebook”
iPython Notebook

✗ A web-based interactive computational environment

✗ JSON document containing an ordered list of input/output cells

✗ Can contain code, text, mathematics, plots and rich media.
× Ordered list of input & output
iPython Notebook

✗ Ordered list of input & output

✗ Control + Enter to run current block

✗ Shift + Enter to run and move forward
× **Ordered** list of input & output

× **Order matters!**

```
In [ ]: a = True

In [ ]: if a:
    print("hello")
else:
    print("goodbye")

In [ ]: a = False
```
Ordered list of input & output

Order matters!

In [1]: a = True

In [2]: if a:
    print("hello")
else:
    print("goodbye")

hello

In [3]: a = False
Ordered list of input & output

Order matters!

In [1]: a = True

In [4]: if a:
   print("hello")
else:
   print("goodbye")

goodbye

In [3]: a = False
Ordered list of input & output

Asterisk means it's still running or it is queued up to run
iPython Bootcamp

✗ Review Python
✗ List comprehension
✗ Numpy functions: np.linspace, np.eyes
✗ Numpy objects: arrays, matrices
CHECKING-OFF TODAY

✗ No graded check off
✗ Raise your hand/get my attention
✗ Introduce yourself
✗ Name, major, year
✗ Open the ipython test
✗ “jupyter notebook ee16a_ipython_test.ipynb”
✗ Demonstrate how to run a code block
✗ Work on iPython Bootcamp
✗ Find this presentation on the website