Today’s Agenda

- Quick Poll
- About Us
- About Lab: Policies & Overview
- Account Forms
- Anaconda Installation
- Ipython Bootcamp
Survey Time!
About Us!
Seiya - GSI
scono12@b.e.
✘ 21 B+ Capricorn hates worms
✘ 4th Year EECS, 5th time TA
✘ Took 16A Fa15
✘ Interests: Karate, Robots, GNU/Linux, Pioneering in Engineering, Manga, Cooking
✘ Oh Deer
ASE Name – Lab ASE

✘ Year, major
✘ Fun
✘ Facts
✘ Interests

Pictures
Lab Logistics & Policies

✘ Go to your registered section.
✘ Work in pairs!
✘ Arrive on time!
✘ Individual lab score is binary: complete / incomplete.
✘ Free 16% of your grade!
✘ Should not be stressful!

✘ 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](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 Bootcamp** from the course website.
- Extract the zip file
- Open a terminal window and navigate to **iPython Bootcamp**.
  - 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
iPython Notebook

- **Ordered** list of input & output
- Asterisk means it’s still running or it is queued up to run

```
In [*]:
# Example

i = 0
while True:
    i += 1
```

Unlike with...
# Table of Contents

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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 bootcamp
✗ Demonstrate how to run a code block
✗ Work on iPython Bootcamp
✗ Find this presentation on the website