SPIS 10:15am Lecture, Monday week 1

Why are you here?

What is an engineer? What is a scientist? What is a computer scientist?

Characteristics of an engineer

- Determination
- Persistence
- Concise
- Precise
- Curious
- Relevance
- Purpose
- Problem solver
- Automater
- Skilled

Setting expectations

Algorithmic thinking, focus and levels of abstraction

To be successful is to be influential

Ignorance and confusion

Respect

Pair Programming:

- Roles:
    o Driver – driver doesn't do anything the navigator doesn't direct
    o Navigator – directs the driver
- Switch roles regularly
    o Both partner's need to understand and develop skills
- Respect your partner
    o Show up on time
    o Practice good hygiene
- Measure of success
    o You BOTH need to succeed
- Benefits:
    o Learn from your partner (both in explaining and listening)
    o Greater focus
    o Less interruptions
    o More approaches to solutions are considered
    o More errors are discovered during development
    o Knowledge transfer from senior to junior engineers
    o Helps with topics that have high learning curves

- Industry
    - Collaboration
    - Individual contributions
- Best suited for complex tasks
    - Simple solutions can best be done individually
- Projects at the end of the course
    - You may want to divide and conquer for simple tasks.
    - Pair program for harder aspects.

Getting to Lab00:

- spis.ucsd.edu
    - Click: 2017 Academic Program
- sites.google.com/a/eng.ucsd.edu/spis/home/2017_academicprogram
    - Click: FoCS: Foundations of Computer Science
- sites.google.com/a/eng.ucsd.edu/spis/home/2017_academicprogram/2017-foundations
    - Click: FOCS Curriculum
- https://ucsd-cse-spis-2017.github.io/
    - Click: lab00

GitHub:

- Cloud based electronic repository for your work
- Area to collaborate with others

Idle:

- Integrated Development Environment (IDE) for Python
- idle3 for python3