



Day 10: Final Projects

Friday, 7.23.21



Agenda

- Daily check-in
 - Announcements
 - Review solution to Lab 9
- Recap from the last two weeks
- Discussion
- Live coding

Daily check-in

Check in

- Questions?
- Announcements
 - Our guest speaker today will be from **12:30 - 1:30pm EST**, in Zoom as usual, **guest speaker Ming Chow will be joining us from Tufts University**
 - Ming works with a LOT with undergraduates at Tufts, he runs a program that helps undergrads find jobs, internships, TA positions, etc. He will present some undergraduate research, then do a Q&A about anything you might want to know about Tufts / CS undergraduate degrees
- Lab 9: Implementing an AI robotic pet
 - Amy will review the solution to the lab

RECAP

Week 1 Topics

- Monday
 - We learned about **Variables, Types**, and using the Python shell
- Tuesday
 - We learned about **Conditionals, Booleans**, and controlling the flow of our programs
- Wednesday
 - We learned about **Lists** and how to manipulate them
- Thursday
 - We learned about iterating over code using **while and for loops**
- Friday
 - We learned about **functions** and how they made coding easier

Week 2 Topics

- Monday
 - We practiced **functions** and worked on 3 Tufts COMP 11 assignments
- Tuesday
 - We learned about **data collections: sets, tuples, and dictionaries** (and lists again)
- Wednesday
 - We learned about **Modules** and **libraries**, and looked at C++ vs. Python code
- Thursday
 - We learned about **Classes, Objects, and Inheritance**

Guest speakers & panelists

- **Nirav Shah** - Why coding?
- **Jeff Foster** - History of Programming Languages
- **Jivko Sinapov** - AI & Robotics
- **Juhan Sonin** - Why should we care about our Healthcare Data?
- **Google** - Tech Trek visit
- **MIT Lincoln Lab** - Tech Trek visit
- **National Renewable Energy Lab** (Kristi Potter) - Tech Trek visit
- **Amazon** (Connor Gramazio) - Tech Trek visit
- **Ming Chow** (today) - Tufts CS Undergrad Research

Week 1 Skills-Building Modules

- Created our first Github account
- Opened our first Github repository
- Created our personal website using github.io
- Created a landing page for our personal website & styled it
- Added a “fun.html” page to our website
- Added a photo and description to our home page

Week 2 Skills-Building Modules

- Looked at examples of app designs
- Learned about designing features & interactions in an app
- Talked through initial app design: flowcharts, sketches, etc.
- Learned about the procedure of designing an app
- Talked through prototyping an app using a sketching / wireframe software
- Walked through steps of pitching an app
- Learned what a storyboard is, and how to write user documentation

Discussion

Some coding tips for when you're first learning

- Plan out what you want to do BEFORE you start coding
 - Think of your program as a flowchart or a series of decisions or tasks that need to be executed. What steps does the program need to accomplish its goal?
- Do frequent sanity checks when you're coding
 - Code your program bit by bit, *always* test your code along the way
 - Print statements throughout
 - Unit tests (learn what **assert** does)
- Code things that interest you
- Ask your peers & your teachers for help!!
- Use your Tufts.edu account now for any student subscriptions you can find
- Any tips that you all want to share that's helped you?

Final Projects

Final project time!

- We will spend the rest of the day getting started on our final projects
- 3 final projects to choose from:
 - Build on your personal website
 - Design / pitch an app (browser application or mobile app)
 - Code a Python project
- You will have until next Monday, August 2nd, 2021 to submit
- You will submit a project write-up, and a Replit project if you're coding
- You are allowed to work alone or in groups

Final project time!

- You will be able to work on your final project and write-up during our normal afternoon coding time (2-4pm EST). The CAs and I will be available to answer any questions. (*Note: Ashley will join starting at 2:30pm EST*)
- Later today at 4pm EST, we will take volunteers to present their progress, talk through their ideas, or play through their games they've coded up. It would be great to see people present something! Even if it's 1 minute long :)
- **I will create a showcase of all your projects next month on our course website! If you don't want your project to be featured, you can opt-out on your project write-up**
- I will go over the [project handout](#) now, and talk about each final project option

Final project time!

- Questions about the final project?
- [Optional] Put your final project on your Github!! You'll thank yourself one day
- The CAs will start our afternoon session at 2pm EST, there you can decide on groups
 - Any thoughts on this?
- Ashley will join in at 2:30pm EST to help answer questions
- Remember: this should be a low-stress project, but at the same time - have fun with it!
- 4pm EST we will have presentations and chat a bit
 - Bring a refreshment or snack?

For those who I might not see in the afternoon

Thank you so much each and every one of you who made this program a great success this summer! It's tough organizing something like this virtually, and I've been super nervous about it, so really - thank you :'))

Keep in contact with me!

- personal: ashleysuh1@gmail.com / work: ashley.suh@tufts.edu

If you need a recommendation letter, email me and/or the CAs. If you end up at Tufts, let me know! I'm happy to help out if any of you ever need anything or want to ask any advice.