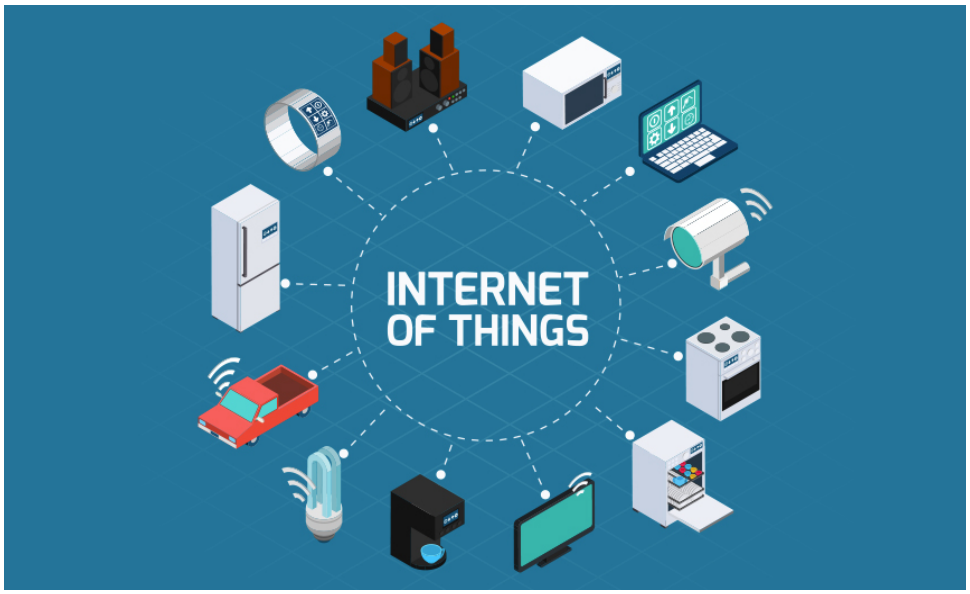

ECS 198F: Applied IoT

Spring Quarter 2021

- **Objective:** Introduce students to the following concepts and their relation with IoT: web development, simple embedded system programming, and machine learning.
    - 2 Unit Course - No core or elective requirements will be fulfilled.
- **Prereqs:** ECS 36C and ECS 50 (Not enforced)
- **Class Structure and timings:**
    - Tuesday and Thursday 3:00 PM - 3:50 PM PST (lectures will be recorded)
    - If we finish the week's material before or during Thursday ⇒ that remaining portion of the lecture will be considered "open hours" and you can ask me any questions related to the class and/or homework.
- **Office Hours:**
    - Mohammad Ismail Daud (mdaud@ucdavis.edu) Wednesday 7:00 PM - 8:00 PM PST
- **Class Discord:**
    - We will be using Discord instead of Piazza, as a class forum.
    - Be courteous and respectful to others!
    - Link: https://discord.gg/jDZh4YcXmh
- **Readings:**
    - Readings and guides should help you answer the homework questions and further help you understand the material we talk about in class! You are not required to read them.
- **Class materials:**
    - You will be required to purchase the following materials:

    - https://www.amazon.com/CanaKit-Raspberry-4GB-Starter-Kit/dp/B07V5JTMV9 ($99.98) [Raspberry PI 4]
    - https://www.amazon.com/FTCBlock-Temperature-Humidity-Arduino-Raspberry/dp/B079NJ64RV/ref=sr_1_6?dchild=1&keywords=DHT11&qid=1614973368&s=industrial&sr=1-6 ($7.99) [Sensor & wires]
    - Total: $**107.97** (pre tax, delivery charges and other fees)
- **Assessment:**
    - A weekly two minute video uploaded to YouTube (you can unlist them if you want) → will perform that week's class project (you just need to follow my lecture) → answer a couple of questions that will allow you to delve deeper into the material(will require some research).
        - These will be peer reviewed via Canvas.
        - Extra points for actually editing your videos before putting them on YouTube!
        - Get points for getting questions right, lose them for getting them wrong.
        - You also get points for peer reviewing.
        - Supposed to prepare you for the "real world" and a good skill for online hackathons!
        - If you feel that you were reviewed unfairly → email me ASAP!
        - You can fail 4 (less than 7 points) homeworks (total 10)
        - Should not be hard but might require you to think :)
        - Posted after the lecture on Thursday → Due right before the next Thursday lecture.
    - No exams,quizzes,essays, or final :)

- **Code of conduct:**
    - Please do not harass your fellow students on Discord or any other platform.
    - Please be respectful and patient with me → I am a student like you and I will make mistakes!
    - You will have to show your student ID before talking in each homework video.
    - If you get reported by a peer for stealing somebody else's video→ automatically get a NP and SJA referral.
        - Please PLEASE PLEASE don't make me do this.
    - If you are cheating in a two unit class that fulfills none of your elective or core requirements(other than the unit requirement) → please think about what you are doing with your life :(
    - If I find that you did not get correctly reported by a peer → the person who didn't report you will get an NP. I can *possibly* look at your videos.

Week	Main Topic
1	Overview of IoT architecture, applications, and security issues

2	Data gathering with sensors
3	Further processing and getting ready to send data to the web server
4	Setting up a web server/cloud
5	Getting deeper into web dev.
6	Applications, Implementations, and Ethics of Machine Learning
7	Giving the backend a brain ⇒ Intro to Machine Learning
8	Going deeper in Machine Learning
9	Sending data back
10	The Wrap up