Course Project of CET4925 Internet of Things

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1. General Requirement

In the semester, a team of maximum three students needs to design, develop, build and demonstrate an instructor approved IoT project based on a physical computing platform (Photon is recommended). With the instructor's guidance and approval, each team chooses the title and objective of the course project.

Minimum requirement of the course project:
- At least a type of input (either a type of sensor reading or human input) is used by the finished system;
- At least an IoT cloud platform is used (choose from AWS, IBM Cloud/Watson, Google Cloud, Azure, Particle Cloud, Salesforce, KaaIoT, … …)

2. Categories of IoT Applications/Ideas

The top 10 IoT Application Areas (by Feb 2015, according to IoTAnalytics, copyright@ iotanalytics.com):

1. Smart Home/Home Automation
2. Wearables
3. Smart City
4. Smart Grid
5. Industrial Internet
6. Connected cars
7. Connected Health/Healthcare, assistive living
8. Smart Retail
9. Smart Supply Chain
10. Smart Farming

Other applications: transportation/traffic engineering, education, sports, … …

3. Websites of Sample IoT Projects

Here are some websites you can find some sample IoT projects. Take a look and get inspirations. You can use them as reference. **But do NOT just copy them!**

1. **Youtube**: search "IoT project" in Youtube. For a specific platform, add the corresponding keyword to search IoT projects using the platform.
2. **Particle Community** projects: https://particle.hackster.io/
3. **Instructables**:
   Particle projects: http://www.instructables.com/id/Spark-Projects/

    Intel IoT Invitational Projects: www.instructables.com/id/Intel-IoT-Invitational-Projects/
    Other IoT projects on Instructables: www.instructables.com/howto/iot/

4. **Hackster**: IoT projects on hackster.io: hackster.io/projects/tags/internet+of+things
and Particle projects: https://particle.hackster.io/

5. 100+ Ultimate List of IOT Projects For Engineering Students:
http://www.electronicshub.org/iot-project-ideas/

6. **Maker**: IoT projects featured on Maker magzine website:
makezine.com/category/technology/iot/

7. IoT projects listed on Nevonprojects.com: http://nevonprojects.com/iot-projects/

8. IoT projects made during **Hackaday** events: http://hackaday.com/?s=iot+project

9. IoT projects by Adafruit: https://blog.adafruit.com/category/iot/

10.   **GitHub**: Many many IoT projects on GitHub ......

11.   ... ...

Do as much research online as possible, you may get ideas or inspirations from other people's projects, and come up with your own idea and project.

If you have any question about the project idea, or not clear what project to do, or particularly not sure if your idea is achievable within a semester, please feel free to discuss with me at any time. Whenever your team has some ideas or options for the project, just feel free to let me know, and I can provide some suggestions or comments to help you finalize the project selection.

Every team MUST discuss with me to get approval for the chosen project.

4. Example Projects from Previous Semester
See course website

5. Parts for Project; Websites to Order Parts/Supplies
See separate handouts/course website.