ECE 544 Particle Photon and Cloud

Particle Photon (device):

- Microcontroller with WiFi module
- Uses the Arduino language
- https://docs.particle.io/reference/firmware/photon/

Particle Cloud (cloud platform):

- Communicates to the Photon wirelessly
- Rest API
- https://docs.particle.io/reference/api/

Start here:

- https://docs.particle.io/guide/getting-started/intro/photon/

Methods to build:

- Web IDE: https://docs.particle.io/guide/getting-started/build/photon/
  - Online text editor
  - Online compiler
  - Flash wirelessly
- Command Line Client: https://docs.particle.io/reference/cli/
  - Your favorite text editor
  - Online compiler
  - Flash via USB

Integrating with other web services (e.g., Google charts):

- https://docs.particle.io/reference/javascript/
- https://docs.particle.io/guide/tools-and-features/webhooks/
- https://www.hackster.io/gusgonnet/storing-data-in-google-714dde
- https://keen.io/docs/integrations/particle/
- https://developers.google.com/chart/

Particle on the Pi:

- You can run a local version of the particle cloud server without access to the internet (https://docs.particle.io/support/troubleshooting/cloud-solutions/photon/)
- You can also do TCP client/server networking using a router https://docs.particle.io/reference/firmware/photon/#ipaddress (UDP is also possible).

Super basic example of blinking LED is provided here: https://github.com/EC544-BU/EC544_demos/tree/master/demos/ParticleCloud