## OpenAg™ Cloud Description

## Current Design (as of 2018-09-15 rbaynes)

- App Engine flex environment deployments
  - o MQTT / PubSub service to validate and store messages
  - ReactJS web UI
  - o Flask API for UI
- MQTT / PubSub IoT messaging
  - Secure data publishing from all devices and individual device control
- IoT Core device registry
  - Manages our IoT devices
- Firebase cloud function
  - o Open function to accept IoT device public key and save to Firestore collection
- Firestore
  - o loT device public key collection
- BigQuery
  - o Research data, recipes
- Datastore
  - User profile, recipes, devices
- Storage
  - o Images, timelapses
  - Database backups

## **Future Additions**

- App Engine
  - Image timelapse creation task (Dataflow?)
- ML for CV tasks
- Data analytics
- Memcached?