# Project Options and Suggestions

## Project List

Teams will need to pick a project subject. The project scope can be from existing work you have done in classes or work you are doing on research projects currently. The scope must be something that 5 people can contribute equally to over the course of 15 weeks and is not expected to 100% feature complete, but must be re-deployable and usable in all phases.

## Suggested Outlines

* Bug Overflow Q & A
  + Create a near feature complete copy of Stackoverflow Q&A site
  + Instead of tech based Q & A, this will be based on identifying various types of insects
  + Create user accounts and profile post questions, images, and answers
  + Up and Down vote questions, track user points
  + Create storage solution for photos
* Project Factor
  + Create a system allowing users to create accounts and upload video, using a speech to text library (cloud based or opensource) to create text transcripts of these videos
  + Include solution for storage of videos and cost justification
  + Using a Hadoop/Solr/Lucene based application create an search engine to allow for searching of phrases and correlation with timestamp index in the corresponding video
* Flickr/Instagram hybrid internal photo search site
  + Create a flicker like tagged photo system allowing employees to search and modify stock photos (I will provide the photos to you)
  + Analyze realtime image rendering vs storing pre-rendered images
  + Create storage solution for images
* Autonomous Drone Movement Framework Management Console
  + Interface with PixHawk based UAVs via [Dronekit.io](https://dronekit.io)
  + Create a system for autonomously querying and ordering UAVs
  + Create a software package for installation and create backend for storage of inflight telemetry
* Virtual Reality (VR) based Networking Lab
  + Creating a VR based application that would be a self-contained network routing and switching app
  + Create visual demonstrations (lectures)
  + Create hands on networking and switching exercises to allow for virtual “hands-on” exercises
  + Using a small physical switching and routing setup, create a bridge to allow the virtual configuration to be applied in real life.
* Create and AI assistant for College Classes
  + Google Home, Amazon Echo, and or OpenSource Mycroft based assistant
  + Coordinate department syllabi to be injected into application (will be provided)
  + Create voice syntax for querying via voice and receiving spoken responses
  + Focus on VI/VX (voice interface, voice experience) to make the service as friendly as possible
* Create a functioning PaaS using [Red Hat OpenShift project](https://www.openshift.com/)
  + Prototype the initial setup
  + Implement the initial setup on department provided hardware
  + Re-implement several projects from previous semesters as proof of concepts (code will be provided)
* Other student defined projects