COMP-SCI 5542 (SP17) - Big Data Analytics and Applications
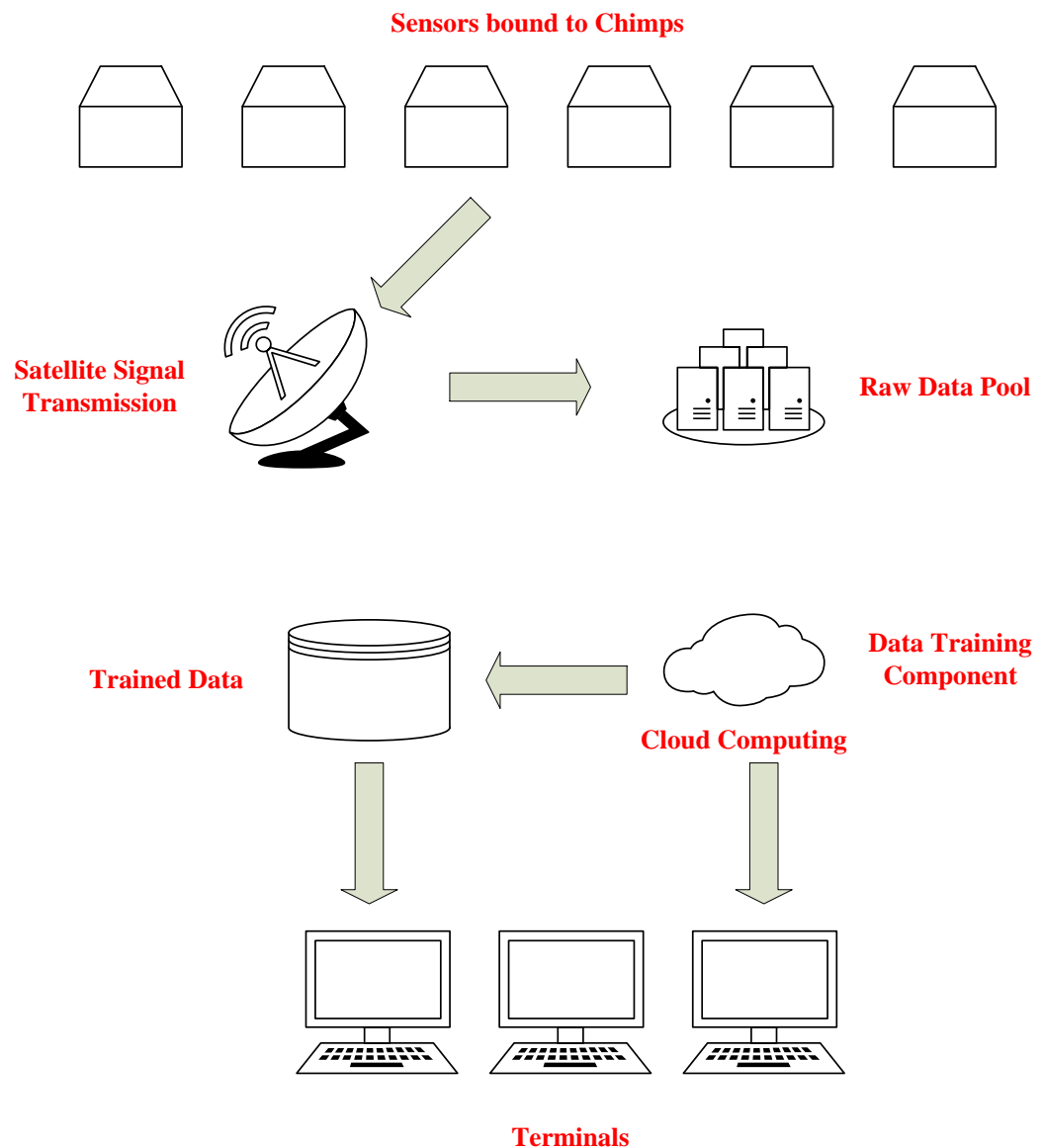
Tutorial 1 Assignment (Due 01/25/17 by 11:59 PM)

Dayu Wang **(45)**

1. Problem Set 1

   a. Draw a software architecture diagram and design workflow for the chimpanzee monitoring problem of Problem Set 1.

   Software Architecture Diagram (Figure 1):

Figure 1. Software Architecture Diagram of the chimpanzee monitoring problem.
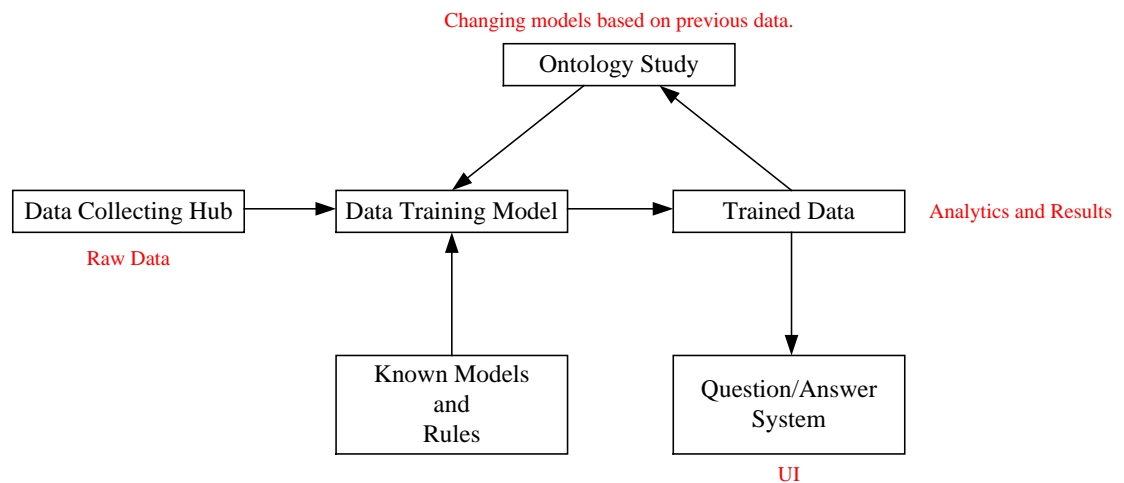
Design Workflow (Figure 2):

Changing models based on previous data.

Ontology Study

Data Collecting Hub → Data Training Model → Trained Data   Analytics and Results

Raw Data

Known Models
and
Rules

Question/Answer
System

UI

Figure 2. Workflow designation of the chimpanzee monitoring problem.

b. Write a pseudocode for the Odd Man Out problem of the Problem Set 1.

Algorithm Find-Single-Number(*A*[*n*]) // Assume the array contains at least 3 numbers.
1   *result* ← 0
2   **for** *i* ← 1 **to** *n*
3   *result* ← *result* **x*OR** *A*[*i*] // "*x*OR" is the bitwise exclusive-OR operation.
4   **endfor**
5   **return** *result*
6   **End**

2. Create GitHub Account. Create a repository in remote GitHub. Clone it to local machine. Create 2 (`Source` and `Documentation`) directories in local GitHub. Put the document with the pseudo code of question 1 under `documentation` directory in the local windows GitHub and sync it to remote Github.

GitHub repository: https://github.com/dwk894/COMP-SCI_5542_SP17_Tutorials

3. Create ZenHub Tool Account. Create a board, 3 iterations, at least 5 tasks and show the analytics graph.

Figure 3 shows the 3 iterations.
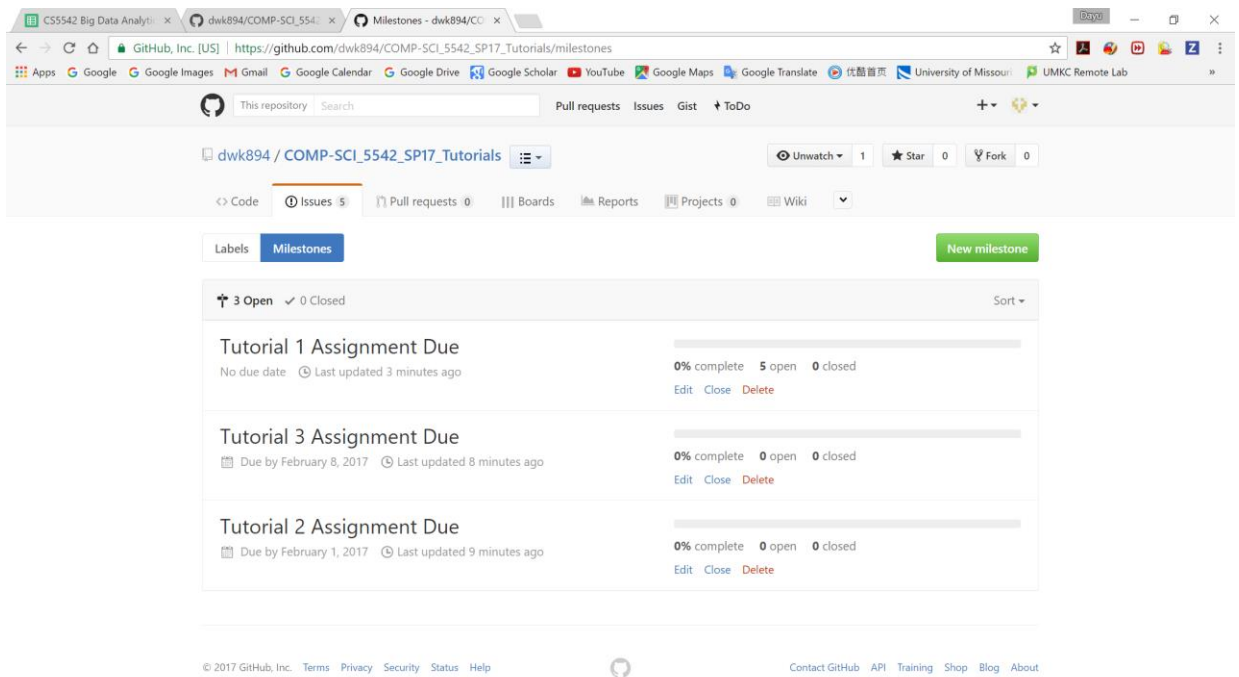Figure 4 shows the 5 tasks.
Figure 5 shows the analytics graph.

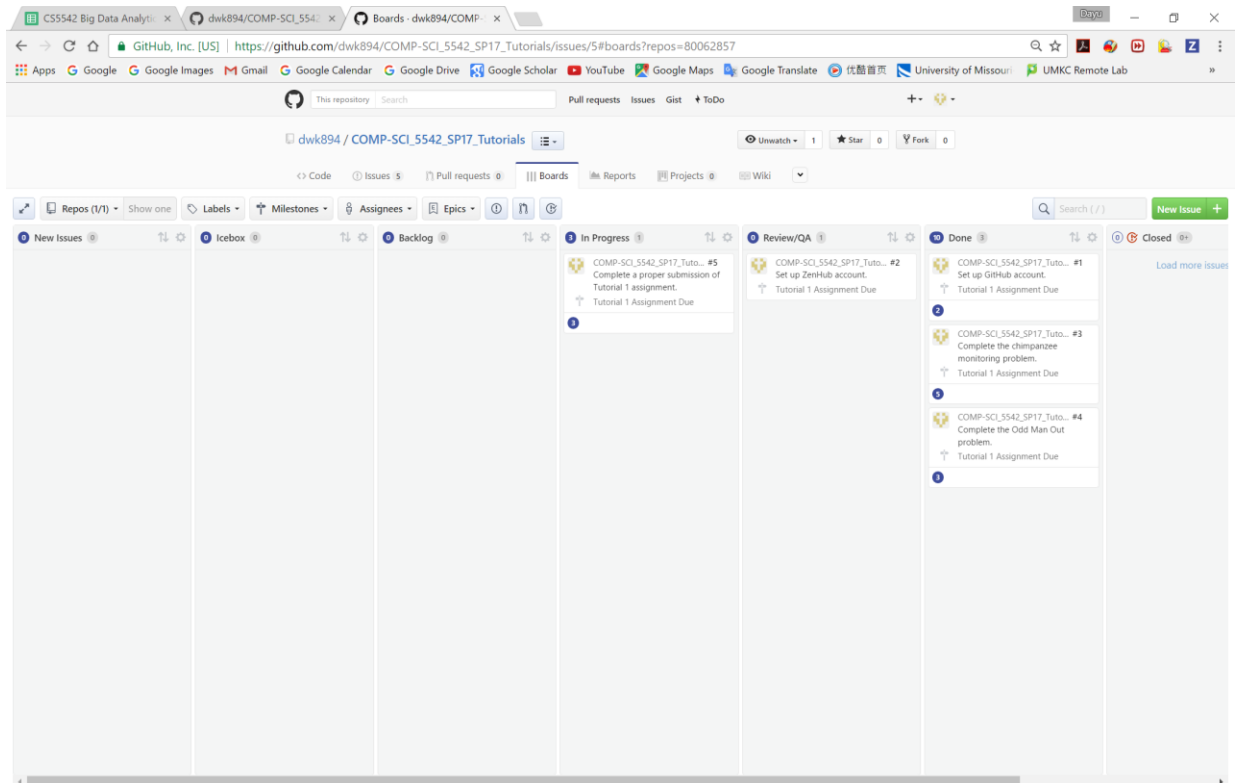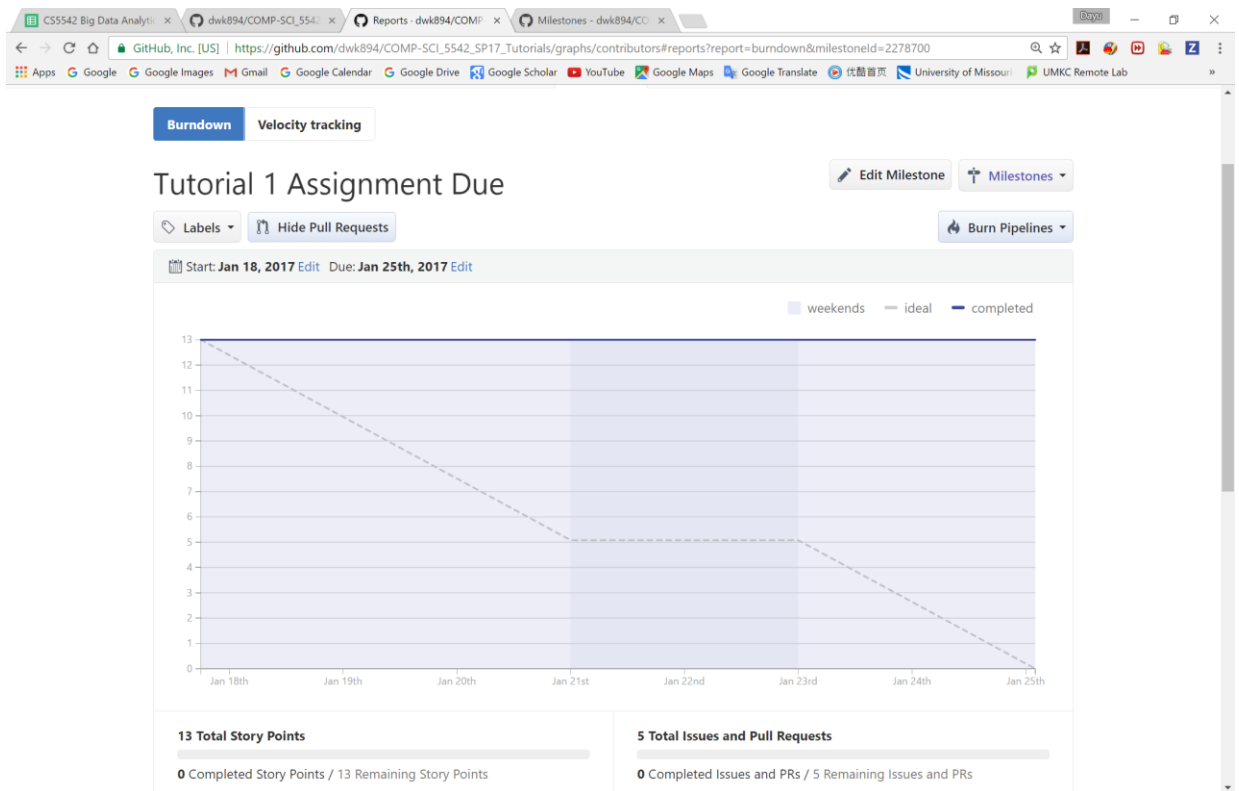**Figure 3**. The 3 iterations in ZenHub.

Figure 4. The 5 task created in ZenHub.

Figure 5. Analytics graph of in ZenHub.