Research Summary Report

I have start working since last semester and officially start working March 1. I have been working 10 hours per week to complete weekly goal. The following is what I have done and the amount of time it took me for each tasks

# First Semester:

* Learning Elasticsearch Functions(mapping, import data), queries(simple query such as match query, Boolean query), QURL commands and set up the environment(Kibana and elasticsearch) (4 weeks)
* I have clean up REU corpus (1 week) transferring format from bibliography to Jason (2 weeks), and import them work with different queries (1 week)
* Read through few research paper, getting more idea about personalize learning, data analysis fundamental, long short term memory model, machine learning articles, and also read few chapters of elasticsearch Textbook (4 weeks)

# Second Semester:

* Extract PDF file into text format using Tika, transfer utf-8 to asci and clean up all the unreadable character (3 weeks), transfer the format into Jason and combine with the bibliography also upload into elasticsearch (2 weeks)
* Learn more in depth queries for elasticsearch such as fuzzy search, more like this search, phrase query, and create a PowerPoint that summarize information of elasticsearch(3 weeks)
* Learning new search engine, like Wampus, Indri(1 week), learning different models for information retrieval (Boolean, inference, language possibility, and more) (2 weeks)
* Work with crainfield, Transfer data in to Jason format, import data into elasticsearch (2 weeks), implementing crainfield and using BM25 vector space models to find the best match to compare with exists query question’s matches.(2 weeks)