Assignment 3

ITE 351 – Introduction to Artificial Intelligence

Task1. Team Members

Kim Chnag Hee 2015005396

Kim Taek Joon 2015005405

Jeon Hyun Kook 2015005650

Chu Heon Nam 2015005732

Task2. Research proposal including title

Title: Providing personalized information with voicelog

Proposal: We will going to use NLP in order to extract the entity frequency from the sentence. We will use it to analyze the relationship between the scores you enter and the words that appear frequently. And we will train and use the Naïve Bayesian Classification model for sentimental analysis. If possible, we will improve the accuracy of sentimental analysis by using Korean Sentimental Dictionary, which is currently distributed online. For the recommendation algorithm, we’re going to use Item-based Filtering. But there’s a problem of lack of initial number of dataset, we’re going to search SNS by words and sort by most frequent words.

Task3. Related works and tools(software)

As mentioned above, we will use two models: sentiental analysis model and product recommendation models. we will use Surprise([htt selib.com/](http://surpriselib.com/)) library and Naive Bayesian Classification model of TextBlob(<https://textblob.readthedocs.io/en/dev/>) library to implement those models. We will use lovit textmining dataset(<https://lovit.github.io/dataset/2019/02/16/textmining_dataset/>) which consists of various Korean sentences to train Naive Bayesian Classification. Before training Naive Bayesian Classification, each sentences that will be used as

taset should be divided into morphemes. To do this we will use KoNLPy library. (<https://konlpy-ko.readthedocs.io/ko/v0.4.3/>) train a recommendation model we will use ‘Movielens’ and ‘Jester’ built in deataset.

And we will use flask framework to implement backend proxy to connect speaker and models, AWS lambda to deploy application implemented in flask, MongoDB to store data for each user and NUGU play-kit for implementing DM(dialog management) for NUGU AI speaker

Task 4. Rough Plan

Plan1 – Implement flask web server and train models: ~ Nov.15

Plan2 – Integrate models in the web server and deploy it to AWS: ~ 11/28

Plan3 - Implement DM(Dialog Manger) for NUGU AI speaker: ~ 12/5

Plan4 – Make a connection with NUGU AI speaker and flask web server: ~12/10