

EE/CPR E/ SE Weekly Report 8

April 20-April 26

Group Number: 08

Project Title: Artificially Intelligent Requirements Analysis Tools

Client & Advisor: Collins Aerospace & Dr. Simanta Mitra

Team Members & Roles:

- Ryan Cerveny: Scrum Master, Meeting Scribe/Facilitator, Project Lead, Communicator
- Apurva Patel: Project Lead, Report Manager, Technical Support, Communicator, AI Training Lead
- Jonathan Murphy: Testing Engineer, Researcher, Requirement Lead
- Takao Shibamoto: Chief Engineer, Researcher, UI Lead

Weekly Summary:

The team mostly worked on Design Documentation, project plan and presentation. Jonathan implemented GloVe and conducted experiments on a requirement dataset, and Takao conducted experiments on the same dataset with his implementation of a Topic Modeling approach.

Past Week Accomplishments:

GloVe Experiments (Jonathan)

During the past weekend, Jonathan implemented GloVe, which is a common approach to determine word similarity, and ran the experiment on a requirement dataset to see how well it would distinguish good requirement links from bad requirement links. The results proved that GloVe was effective in comparing two words, but not two sentences when context of the words being used must also be taken into account. The average similarities of the good and bad links only varied by 0.02, making it impossible to make a classification based on the similarity score.

Project plan (TEAM):

Everyone worked on project plan documentation and has been submitted.

Presentation (TEAM):

Everyone worked on the presentation. Did practice based on presentation.

Meeting with Collins Aerospace (TEAM):

Meeting with Jason on Monday discussing experimentation for topic modeling and the possibility for Collins full time staff to join onto the project. Later, Collins decided topic modeling was not the way they wanted to try, and that we would go back to word vectors and try out neural nets.

Individual Contributions:

Name	Individual Contributions	Hours	Hours Cumulative
Jonathan Murphy	-Project Plan -Presentation -Meeting -Experimented with GloVe	15	Approx. 91
Apurva Patel	-Project Plan -Presentation -Meeting	15	101
Ryan Cerveny	-Project Plan -Presentation -Meeting	13	Approx. 105
Takao Shibamoto	-Project Plan -Presentation -Meeting	10	94

Plans for Upcoming Week:

- Design Documentation
- Presentation Preparation
- Wrapping up the Semester