

EE/CPR E/ SE Biweekly Report 4

10/12/2019 - 10/25/2019

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

Bi-Weekly Summary:

Jonathan has continued research on the ML portion of the project. He discovered the concept of “Siamese Networks” and has been working with implementations of Siamese LSTM and Siamese XGBoost in order to modify them to accurately classify requirement data.

Jonathan also had a meeting with our contact at Collins to share these discoveries and discuss the best next steps for research.

Reviewed requirements for front and back end and began updating requirements to increase functionality with real time updates, and authentication. We have also continued discussing how to integrate client code into our project which is a tough task considering they do not have a known api for their code.

Past Week Accomplishments:

Deeper research into ML classifier implementations, specifically into the concept of Siamese Networks.

Meeting with client to discuss latest research findings.

Individual Contributions:

Name	Individual Contributions	Hours	Hours Cumulative (continuation)
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Jonathan Murphy	<p>→ Researched “Siamese Network” implementations of LSTM</p> <p>→ Experimented with an implementation of W2V/XGBoost and has been trying to modify it to accurately classify requirement data</p> <p>→ Discovered how to export eli5 reporting to web pages</p> <p>→ Met with Jason to discuss best next steps for ML research</p>	15	Approx. 138
Apurva Patel	django rest framework	5	125
Ryan Cervený	<p>Process of reviewing and updating requirements for front and back end.</p> <p>Taking over the database creation.</p>	5	Approx. 130
Takao Shibamoto	<p>Continue to learn kubernetes.</p> <p>Discussed the problem of not being able to design the configuration page until Jason finishes the model and what kind of options need to be in the configuration.</p>	5	110

Plans for the Upcoming Week:

- Set up database
- Continue managing requirements
- Set up rest api
- Continue designing and creation of front end pages