

EE / CPR E / SE 492 - sdddec20-22

DNA to Feature Models

Biweekly Status Report 2

8/31/2020 - 9/14/2020

Client: Dr. Myra Cohen

Faculty Advisor: Dr. Myra Cohen

DNA To Feature Models

The following report presents the progress of the senior design team for the project, DNA to Feature Models, in the past two weeks. This progress report also entails a partial recap of where the team left off from last semester.

Team Members:

- Abdul Rahman El Moughrabi - Developer/Documentation Management
- Ahmad Nazar - Team Leader/Developer
- Ahmed Alketbi - Developer/Debugger
- Hyegeun Gug - Developer/Web Management
- Prathik Nair - Debugger/Developer

Past Week Accomplishments:

A solid frontend model has been developed and designed and is in the process of being developed to be applied within the plugin. The model serves as a guide to creating the interface to which users can fetch data to include in their Feature Model. A program which executes a native shell has also been completed for the execution of specific commands within the plugin

Pending Issues

- Designing the frontend in terms of code
- Applying some functionality to the aforementioned
- Implementation of the shell program within the plugin
- Completing some last backend functionalities

Individual Contributions:

Abdul Rahman El Moughrabi

During the past 2 weeks, I looked at the frontend part and ways we can implement it to add/cover all scenarios needed for our plugin. I drew a sketch of how the plugin will look and what actions/buttons are available to the user. I also started coding the base of the design and basic features. For the next 2 weeks, I will keep adding to the plugin until it is complete.

Ahmad Nazar

For the preceding two weeks, I implemented a program which runs a native shell on a computer in order to execute a specific set of commands. The idea was to implement fetching of live data from the database on startup of the plugin; the use of curl commands on startup through a native shell achieves this feat. I created the aforementioned program and am in the process of understanding how to apply that program in the form of the plugin. The goal for the next biweekly report is to have this functionality working.

Ahmed Alketbi

In the past 2 weeks, I continued working on the XML extracting and parsing. I tested the code manually and fixed some bugs with inconsistent part information (missing from the BioBrick's XML database) to prevent the code from crashing. I am currently working on a universal XML parser so we don't need to use a parser for each category of parts. I still need to implement support for the other parts' categories. I also started looking into creating XML files which might be useful in constructing FeatureIDE' feature models.

HyeGeun Gug

During the past 2 weeks, I have started to work more on the backend including file parsings for other catalogs. There are 4 more catalogs that have to be finished and aiming to finish it by next week. There are minor issues due to the low quality of the test I have run. Web scraping for categories needs to be done, in order to finish more testing.

Prathik Nair

I have developed a plan to work on parsing the remaining files for various different part types; there are quite a lot of parts so this is something that could keep me busy for a good amount of time- I want to help lead some of the bigger upcoming tasks that lie of ahead of us, the biggest one being the presentation. As the least technically skilled person on the team, I think working on our presentation would be a good use of my time.

Team Member	Weekly Hours	Total Hours
Abdul Rahman El Moughrabi	4	9
Ahmad Nazar	4	7
Ahmed Alketbi	5	8
HyeGeun Gug	4	8
Prathik Nair	4	8

Plans of Action:

- Complete more experiments with plugin development
- Web scrape the rest of the BioBricks Repository to push to the project database
- Understand FeatureIDE's source code for seamless plugin integration
- Implement native shell within the plugin
- Fetch and use live data from the database