

EE / CPR E / SE 491 - sddec20-22

DNA to Feature Models

Week 4 Report

3/1/2020 - 3/15/2020

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. The team started to analyze FeatureIDE's source code with respect to the XML builder, and started testing the file parser.

### **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:**

- Created a File Parser Algorithm
- Created a solid abstract class for an arbitrary part
- Started a local, empty database for parts
- Started testing with file parsing

### **Pending Issues**

- Analyzing source code
- Stress testing file parser on different inputs from web scraping
- Deciding which file type is better to parse (text or XML)

### Individual Contributions:

#### **Abdul Rahman El Moughrabi**

In the past 2 weeks, I contributed by doing more data scraping experiments and trying my best to translate it into a format that is readable by the eclipse plugin. I also practiced my java coding skills to refresh and remember. I want to fully grasp the concept of data scraping before moving on to the next step to be able to put it behind me and move with confidence. I also tried building more feature models in eclipse and further expand the idea of how a feature model is made to be able to do our project with success!

#### **Ahmad Nazar**

For the duration of the past two weeks, I refined and tested the file parser. The algorithm worked as expected; all that remains are unit tests to handle extreme cases. The current task is analyzing FeatureIDE's source code to understand how XML model trees are built. Understanding this function allows future integration of database of parts instead of the current functionality: creating a property-less part with a default naming convention such as NewFeatureN.

#### **Ahmed Alketbi**

In the past two weeks, I ran our server locally and started testing the file parser that Ahmad Nazar created. I came up with an idea to parse the XML file instead of the text file which might be useful in retrieving parts information. I am currently investigating if an XML parser would give a better advantage or not before going with text file parser.

#### **Hyegeun Gug**

For the last two weeks, I have done minor testing of data scraping and how XML is formed including a relationship with the source code. It would be better to make sure data scraping works and modified to store data to our database. Moreover, by figuring relationships between XML and source code, it would be easier for us to build parts databases.

#### **Prathik Nair**

For the last week I have been figuring out the web scraper; my primary goal has been to write some code to test the validity of my own web scraper and seeing if it is useful to implement in our current project. Using the files provided by Dr.Cohen, I was able to parse some text, but was not completely successful.

Team Member	Weekly Hours	Total Hours
Abdul Rahman El Moughrabi	5	19
Ahmad Nazar	4	20.5
Ahmed Alketbi	4.5	19
Hyegeun Gug	3.5	18.5
Prathik Nair	4	18

### Plans of Action:

By the next report, the team hopes to achieve the following goals:

1. Stress-test file parser algorithm on different inputs to ensure edge case success.
2. Analyze source code of FeatureIDE, specifically the XML builder.
3. Start data dump in database based on current file parser output.
4. Create more part classes
5. Test file parser with XML instead of text (Alternative)