Automating PLORAS - March 11, 2016
Bi-Weekly Report 5

Team 32

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1 Overview of last two weeks

This bi weekly report period has only been one week long. Nevertheless, progress has been made on multiple fronts. The virtual machine has been set up with access available via SSH. We have MATLAB and Python installed on the machine in preparation for its role in processing the MRI scans. For the front end, we have worked on the Review page of the web application. This displays some scan details as well as place holders for patient predictions and a 3D representation. It also allows a feature to print or save the results as a PDF. Progress has also been made on the Excel look up table which is almost completed.

2 Summary of meetings

2.1 Meeting 1: 08/03/16

In this meeting we worked on getting the virtual machine set up and running with the clients. We had to do this by generating a public and private key so that we could access the server via SSH. There were some issues with the firewall configuration but we were eventually able to access and alter the virtual machine. Another thing we worked on was deciding on what would we would need to have on the virtual machine. These included adding the latest version of MATLAB and Python.

2.2 Meeting 2: 11/03/16

There were some issues with regards to accessing the virtual machine from all team members via ThinLinc. We met up to try and work out where the issues were and aimed to fix them. Eventually, we realised that there was a typo when the clients had set up the authorised keys file for SSH access.

3 Tasks completed

A virtual machine has been set up on the PLORAS server to handle the back end of our web application. It can be accessed via SSH from ThinLinc. MATLAB and Python have been set up on the machine to handle the processing of patient scans once uploaded by a user.
For the front end, the Review page has been organised such that it displays patient data as required and also has place holders for patient predictions

and a 3D representation of the patient's brain. We have also allowed the results to be able to be printed or saved as a PDF.

4 Problems that need to be resolved

An issue that we had was in trying to access the virtual machine via SSH from ThinLinc. Eventually we realised that there was an error in the authorised keys file that was set up by the clients. After fixing this issue we were able to access the machine with no issues.

5 Plan for next two weeks

Now that we have the virtual machine set up, we expect to link the front end to the back end in such a way that we will be able to process MRI scans uploaded from the web application and then return the results for the next stage of generating predictions. We also expect to improve the front end further so that all features will have been completed.

6 Individual tasks completed

6.1 Daniel Blackwell

I have continued working on the excel lookup table for Cathy, this is now completed and my next step is converting the formulas into an SQL query that can be run against the PLORAS database; this should prove much quicker as this kind of task is exactly what databases were designed for and the excel formulae to give a similar result are huge. I successfully connected to the VM that we have been provided by the IT department on the project, this proved easier for me than it did for the others due to the fact that I use OSX.

6.2 Jedrzej Stuczynski

Similarly to the last week′s report, this report also consists of only a single week of work done towards the Systems Engineering project. Now this is only due to the single week between the reports submission deadlines. In my case this week consisted of work related to the virtual machine on the PLORAS server we have received access to. Since we have agreed with our client that the machine will be only accessible from inside the Eduroam network we had

to either work only from the campus or find a way around it. With the clients agreement, we managed to set up our public-private SSH keys on our UCL CS machines that we use ThinLinc to connect to. With this we can work on the virtual machine from anywhere. As for the scripting related tasks, I have successfully set up Python MATLAB API on my local machine that we have started putting on the virtual machine. It is the core part of the whole project as it will allow us to call MATLAB processing scripts using the Django frontend.

6.3 Farbas Miah

Over the last week, I have been working through the issues with the clients in setting up the virtual machine. I have also worked on the front end, specifically on the final Review page. All elements of the Review page have now been added which include, patient details, a section for patient predictions and a 3D representation, a print feature and also an option to save as PDF.