Thomas G Wright
tgw4@illinois.edu

CS410 Fall 2020 Project Proposal

Option 2: Improving a System

- 2.1 Meta Toolkit
  - Enhance available tutorials for installing and using the tool on different platforms

This project will cover improving (or creating from scratch if not currently existant) the installation/setup tutorials for MeTA-metapy on several different platforms. OSes which will be considered in improving these tutorials include Windows and multiple Linux versions (Ubuntu, RedHat, Amazon AWS Linux, and perhaps others as time allows) and hopefully ChromeOS if I can get it working (see next to last paragraph below).

The current MeTA Setup Guide tutorials on meta-toolkit.org (or the meta-toolkit section on github) seem to have been done quite some time ago, judging by the fact that the latest Ubuntu version listed is 14.04 and the current version is 20.04. The existing tutorials will be reviewed and tested to be sure that they still work, correcting and enhancing where needed. Instructions for newer versions of software, such as Ubuntu 20.04 will be added, as well as instructions for other Linux distributions.

Also, there seems to be very little documentation for installing/setting up metapy. This project will add tutorials for that on several OSes. These will start from the assumption of a fresh OS install, unlike what instructions seem to exist online, which are very sparse and assume you have pip, git, etc. already installed on your computer. How to get to that stage seems to be a cause of frustration for several that have had problems. These tutorials would be set up to be a link off the tutorials section of the main page, in a section called something like “metapy setup guide”.

All of these tutorials will be written in HTML, and will aim to stay consistent with the style of the current page, which is nealy all text. Some enhancements with screenshots may be added to clarify things where needed, such is currently being done in the “visual setup guide for Windows” tutorial currently on the site.

In addition to OS types which already exist in the tutorials, I will try to see if it is possible to put metapy and/or MeTa on ChromeOS. Online searches reveal that it is possible to put python and gcc on ChromeOS, I will experiment to see if that can be extended to include MeTa or metapy. This will be a whole new OS where it hasn’t been done before, which I feel will be a nice addition to the MeTa/metapy universe, especially as the popularity of Chromebooks grows.

Regarding whether this fulfills the 20 hours per team member, I believe this will easily do that. This is a 1 person team, so it only needs to cover 20 hours total. To ensure that the results from the tutorials are correct and repeatable, I will be sure to use fresh OS installs so that nothing that was already on an existing system from previous installs would cause erroneous results. In the case of writing a whole new tutorial, once it is complete, it will be repeated following the tutorial exactly on a new fresh install, this takes extra time, but I feel it is necessary to be sure the tutorial is accurate. I have a few old PCs that aren’t being used for anything at the moment, so this way one can be re-imaged with a fresh OS install in parallel while working with another one, so it will take some time to do that , but it won’t be too excessive. By also trying to make it work on ChromeOS, I feel this will easily go over 20 hours total of work, as I expect that experiment to take quite a bit of time. Time spent will be tracked, so that if the total time is under 20 hours, more OSes/Linux versions will be added to ensure well over 20 hours of time was put into the project.