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CS 410 Text Information Systems
Course Project Proposal

For my course project, I would like to improve the functionality of the existing MeTA Toolkit. I plan to work individually and bear all responsibilities related to deadlines and deliverables.

University of Illinois students and researchers utilize the MeTA toolkit and the associated metapy bindings for their text analysis studies. The MeTA and metapy online repositories document several issues with the tools that have gone unresolved for years in some cases. Some of these existing issues prevent students from quickly setting up their environments and accomplishing their goals. The time spent on getting the tools to function take away from exploration time that students may otherwise use to dig deeper into their learning and use the toolkit after completing their coursework.

My goal for this project would be to improve the usability of the metapy bindings tool. Specifically, I would like to ensure that this tool works regardless of what version of Python is installed on the host machine. This enhancement would benefit all users so that they would not have to coordinate various Python version on their computers and troubleshoot unexpected behavior of their applications.

I am vaguely familiar with the concept of a Python virtual environment where all of the necessary libraries and versions are contained in a single environment allowing applications to run independent of the Python version(s) installed on the host machine. This would resolve a couple of the outstanding issues related to the MeTA toolkit Python bindings and save time for students setting up their development environments; especially for those that lack experience and have to spend a great deal more time than their experienced counterparts.

I will research virtualization options and select the one I deem most appropriate. I will reproduce some of the issues observed as a result of using newer Python versions and then demonstrate that the issues disappear when using the new virtual environment. If time permits, I would also like to address some of the other outstanding issues with the MeTA toolkit opened on GitHub.

I would to spend a couple of weeks researching the virtualization options and then start prototyping potential solutions. I would like to chose a path and make progress with coding by the last week of November. At that time, I would like to make a determination as to what, if any, GitHub issues will be addressed as well.