**Feasibility**

There are several advantages to working with the typical machine learning technology stack. The development tools and libraries needed for this project are generally open source and readily available. Python, Scikit and its various libraries, TensorFlow, MatLab, and Octave all fall within this realm. An added bonus that this project will provide is a working knowledge of many of the most popular programming languages and tools that are in wide use today in the field of machine learning and beyond.

Of course, any good machine learning project depends heavily on the quality, and sheer size, of its data. In this respect, the project is well-equipped for optimal results. The [DIRECTOR OF UNO \_\_\_LAB] has authorized use of all image data from the AFM research currently being conducted at UNO. This data will make up the crux of a possible AFM image processing Machine learning project. Other possible image processing projects include a similar solution analyzing veterinary pathology image data for the presence of image artifacting versus valid biological indicators in conjunction with researchers at the Louisiana State University School of Veterinary Medicine.

As the subject of machine learning is inherently a complex one, we will undertake a formal introduction to the subject matter through the Coursera course outlined above. This course provides many resources including video instruction, tutorials, lecture notes, test cases, and discussion forums. In addition to these features, we will work closely with Dr. Edwards, our research mentor, to ensure that the project is proceeding on-time and track our progress using the Pivotal Tracker tool.