# Project Title: Automatic Detection of Sub-Kilometer Craters in High Resolution Planetary Images

# Project Description:

Impact craters are the most studied geomorphic features in the solar system because they yield information about the past and present geological processes on planetary surfaces. This project seeks to develop a processing pipeline for fast and accurate surveys of sub-kilometer size craters from high resolution images. Such system will make possible assembling global, “million crater” catalogs of sub-kilometer craters on Mars, Mercury, and the Moon.

# Software Platform:

C++, python, Cygwin, Weka.

A pipeline implemented in C++ and Python will be provided. Utilizing the pipeline, the project mentor will work closely with students to use the techniques of image processing and machine learning to detect craters from a real Mars data set.