Nowadays, there are several health problems that we can encounter, and it is possible that we are experiencing some of these problems yet not aware of it. We are working on a smart system that is capable of monitoring astronaut's daily actions. On a daily basis, astronauts interact with a control panel to work and complete on some of their tasks. The objective of this work is to monitor astronaut’s actions while using this interface. By monitoring their daily base actions, we can create statistics about the everyday performance using machine learning algorithms and learning which is the most appropriate for this problem, can help us achieve these results. By doing so we can determine if there is any abnormal action during their work hours, that can put in any harm these astronauts. Not all of the machine learning algorithms are most adequate for this problem, we determined that some of the most appropriate algorithm for this problem is K-Means Clustering. We can use this algorithm to demonstrate abnormal actions made by the astronauts, as well as, use K- Means to determine more than one problem at a time. After performing several tests, we have determined that this algorithm works properly for this particular problem.

## Abstract

The Translational Research Institute for Space Health are working on a similar project that by using emerging technologies they can help astronauts stay healthy in space. With this on mind, I started to research on finding an efficient algorithm that can be implemented on computers or control panels that astronauts use daily to fulfill some of their tasks. This strategy will detect massive downfalls and provide warning messages due to lack in performance.

## References