**Abstract**

People counting provides a series of valuable metrics that NAU can utilize to allocate resources more effectively. This project aims to provide real time metrics by counting the number of people in different areas around the NAU Flagstaff campus. The goal is to replace the currently expensive people counting solution while maintaining accuracy and scalability. Current people counting solutions capture and store the number of people in an area at any given time utilizing a number of expensive technologies. This proposed solution will capture and analyze images in real time while focusing on reducing these costs, allowing NAU to easily scale this infrastructure effectively. Utilizing a real time object detection algorithm, a web application dashboard, and a Raspberry Pi, a registered user will be able to login and easily analyze metrics in various areas of the NAU campus at any given time.

*Keywords:* Algorithm, object detection, Raspberry Pi, database, people counting, scalability