



## UTILIZING UNSUPERVISED LEARNING TECHNIQUES TO RECOGNIZE TERRAIN FOR SPATIAL POSITIONING IN AERIAL CONTEXTS



**SCHOOL:** ACADEMY FOR TECHNOLOGY AND THE CLASSICS

**LOCATION:** SANTA FE, NM

**FLIGHT PROVIDER:** WORLD VIEW

**GRADES:** HIGH SCHOOL

### STUDENT EXPERIMENT DESCRIPTION

Our experiment aims to test a novel technique for identifying the location of an aerial probe based on imagery taken of the ground below. Through the proposed algorithm, we will be able to make valuable inferences about the location of the craft based on our imagery. While the actual algorithm is far too computationally difficult to run in-flight, we have created a device which will fly on the high-altitude balloon and collect imagery we can run our algorithm on.