Implementing LiDAR in Simultaneous Localization and Mapping Systems

Starratt, Gareth (School: Camas High School)
McOmie, Julian (School: Camas High School)

Currently, the LiDAR industry is booming with the advent of new robotic applications. Within the last few years, demand and massive speculation have lead the industry to see increasing competition and lower costs-- but are these costs sustainable for consumers, or does the price tag still only cater to high-level academic institutions and contractors? A low-price LiDAR scanner will inspire innovation in robotics and see a plethora of applications discovered. Our experiment was designed around the premise that we could produce an accessible and accurate 3D scanner. During our research, we were able to generate a point cloud based on data inputs, which is the goal of our project. Although this is a step in the right direction, we need to refine our hardware and software to reduce drift and increase accuracy.

Awards Won: