EAGER: A Gateway Drone for High School Students

Award # 1940970 01/01/2020
Stefanie Tellex, Brown University

Challenge

- Teaching kids about autonomous robots is important but hard because of a lack of accessible platform and curriculum.

Solution

- Low-cost autonomous drone with all autonomy on-board in Python.

- Teachers use existing computers with a web browser and wifi.

- Curriculum that starts from shell basics and goes through localization and SLAM.
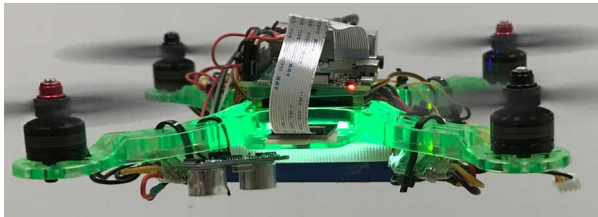
Scientific Impact

- Novel architecture for low-cost easy-to-use autonomous robots.

- Evidence for mechanisms to increase engagement in robotics and CS.

Broader Impact

- Distributed 400 drone kits to high schools throughout Rhode Island.

- Trained 15 high school teachers to teach the class.

- Increased access to autonomous robotics to a wider population.