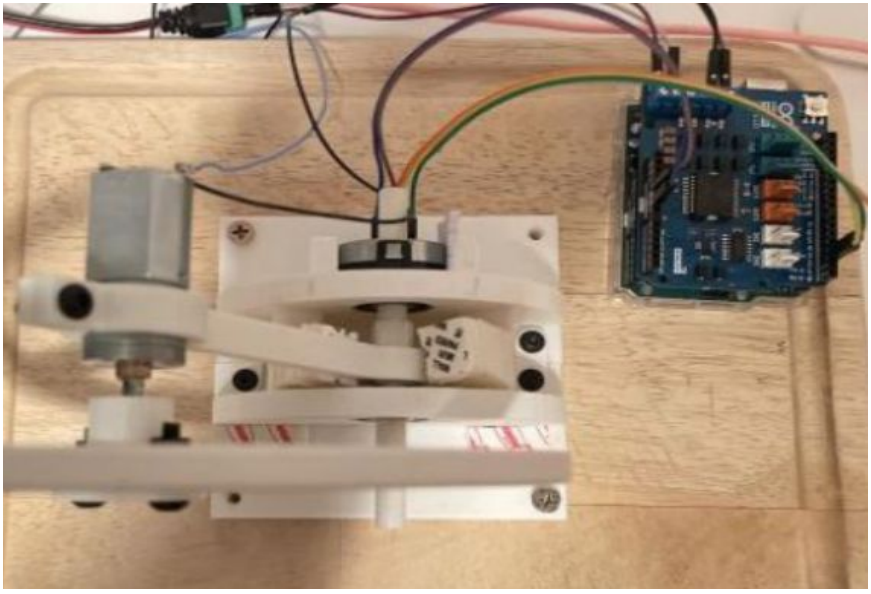
Inverted Pendulum Control System



What?

Design a reaction wheel based inverted pendulum.

Implement a controller to stabilize the system.

How?

Employed numerical analysis to ensure a feasible design using MATLAB and Simulink.

Designed the structural components.

Developed a Proportional-Integral-Derivative (PID) algorithm.

Results

Designed and built a self-stabilizing inverted pendulum in real time.

Tuned PID controlling allows for a fast and accurate stabilization.