

Submission Date	9/12/2019
Project Name	Smart Ping Pong Ball Machine
Student Names	Abshir Mohamud, Mahendra Budhu, Ijlal Siddiqui
Project repository	https://github.com/Abshir-Mohamud/BallSensor
SensorsEffectors choices	Pressure Sensor
The database will store	Whether ball is in place or after 30 seconds that the series of volleys have ended
The mobile device functionality will include	Previous game histories with accuracy percentage, weekly/monthly track improvements. The user can also set the machine to make consent types of shot to train in areas they may lack in
I will be collaborating with the following company/department	Sebastian Dwornik
My group in the winter semester will include	same group
50 word problem statement	Ping Pong Ball machines functionality is usually limited to just shooting a ball in a set trajectory for the user to return back, this leaves the user to an eventual end in there growth when relying to these machines leaving the investment that was initially made completely worthless.
100 words of background	The ping pong ball machine is loaded with any given amount of tennis balls that the user can fit into the machine (specific amount has not been decided). A pressure sensor is placed at the end of the tube where a only a single ping pong ball can be placed and blocks any other balls from entering. Once a single ball the ball is pushed into place so that it may be shot out by the given motors with the appropriate spin. A proximity sensor is placed at the end of the nozel to count the number of balls shot for calculation of accuracy at the end
Current product APA citation	N/A
Existing research IEEE paper APA citation	N/A
Brief description of planned purchases	I am using an Arduino Uno as ask the pressure sensor to convey a signal when a ball is placed on it. This also allows the wifi module to signal the end of the data collection after a given amount of time that balls aren't received
Solution description	My tennis ball machine purpose is a long term investment to those who wishes to improve on there tennis ball skills so the machine contains several functionality additions such as speed, spin and direction changes as well as a record of the users history to track improvement