

**Department of Electrical and Computer
Engineering Fall 2017**

Thursday, December 7, 2017



FIFTH ANNUAL

Poster Session and Demonstrations

COEN 4720 Embedded Systems

EECE 3015 Digital Electronics Laboratory

ELEN 3110 Electromagnetic Fields 1

ELEN 3035 Analog Electronics Laboratory



The following projects are from **EECE 3015**
Digital Electronics Laboratory

– Dr. Susan Schneider



Motion Sensing Cat Treat Dispenser

MU **Motion Detecting Cat Treat Dispenser**
 By: McKenna Stillings and Samantha Winther
 OPUS
 College of Engineering
 MARQUETTE UNIVERSITY

ability, and other when as they would like furry friends. Solutions available at price points other.

which dispenses treats by a motion sensor (timeout mechanism) the at set intervals, the timeout is adjustable, what intervals are activity level and dietary

ing used a PIC4 system consist of a motion from inside the if rotated, pushing the icon is detected, the signal, which is fed in triggered, causing dispensing treats. The Board, with the PIC4

Results:
 The cats loved the device, playing with it for and enjoying the surprise of when treats would. The treats were dispensed at correct intervals quantities.

Validation:

Time Waited (seconds)	Pin Output
1	LOW
2	LOW
3	LOW
7	LOW
10	HIGH
13	HIGH
20	HIGH

Time	500 millisecond (frequency)	500 millisecond (frequency)
1	50	1.00
2	75	1.50
3	100	2.00
4	125	2.50
5	150	3.00
6	175	3.50
7	200	4.00
8	225	4.50
9	250	5.00

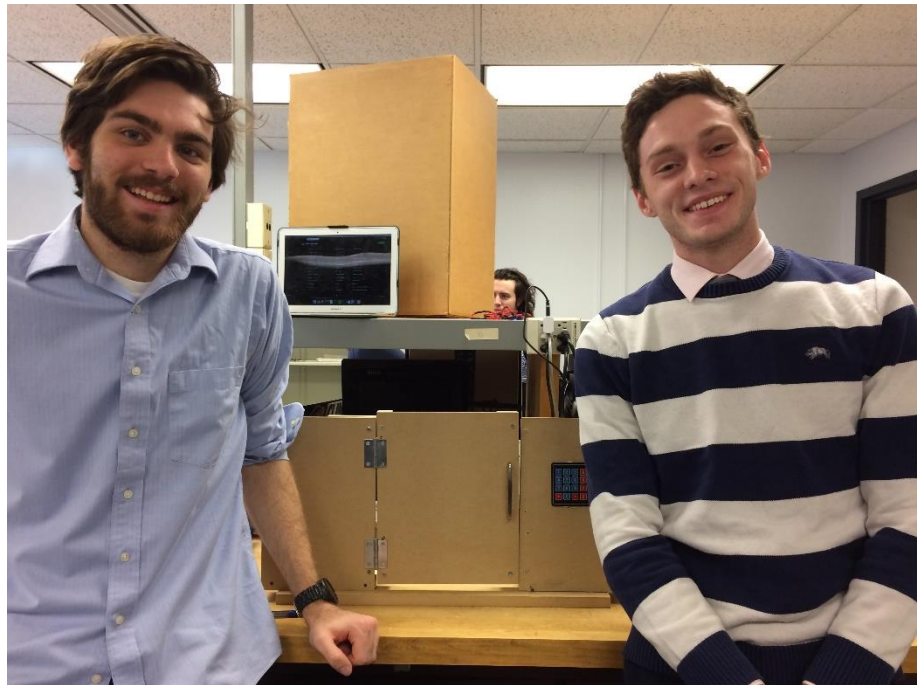
McKenna Stillings and Samantha Winther

Featuring Fluffy and Whiskers as participants



Audible Alarm System

Cameron Baltrusch and Alex Vonderhaar



Keypad Door Lock

Andrew Koetting and Scott Stewart



Catapult Basketball Automatic Scoring

Jaycee Mattis and Allison Kehn