

BRANDON HERNANDEZ

OLATHE NORTHWEST HIGH SCHOOL – OLATHE, KS

ENGINEERING ACADEMY INSTRUCTOR

My Story

Educational Background

- Bachelor's Degree in Secondary Math Education
- Master's Degree in Business Administration

Teaching – The Early Years

- Math: Primarily Algebra 1, Geometry, Precalculus, Calculus AB

The Engineering Shift

- FIRST Robotics leads to teaching Engineering Design and Robotics

Teaching – Recent History

- Love the content; change is the only constant

What I Teach

```
if FtcGamepad2.X then
  set Shooter_Motor.Power to 1
else if FtcGamepad2.Y then
  set Shooter_Motor.Power to -1
else
  set Shooter_Motor.Power to 0

call FtcRobotController.TelemetryAddNumericData
  key Angle
  number get trueAngle

call FtcRobotController.TelemetryAddTextData
  key Alliance
  text if get global Alliance == 0
    then Blue
    else Red

call FtcRobotController.TelemetryAddNumericData
  key Current FL
  number Front_Left.Power

call FtcRobotController.TelemetryAddNumericData
  key Current FR
  number Front_Right.Power

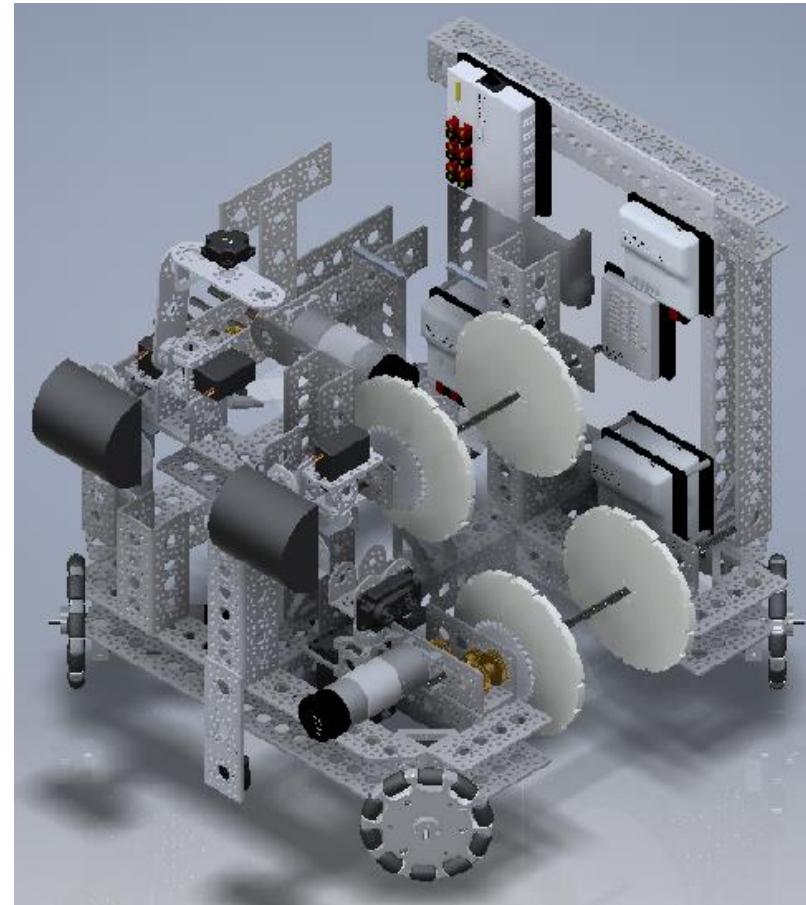
call FtcRobotController.TelemetryAddNumericData
  key Current BL
  number Back_Left.Power

call FtcRobotController.TelemetryAddNumericData
  key Current BR
  number Back_Right.Power

if FtcGamepad1.DpadUp then
  set global Stage to 1
set global InitialTime to PerfectForward.Time

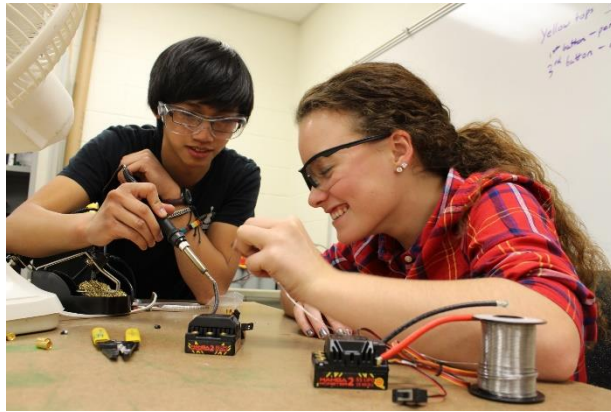
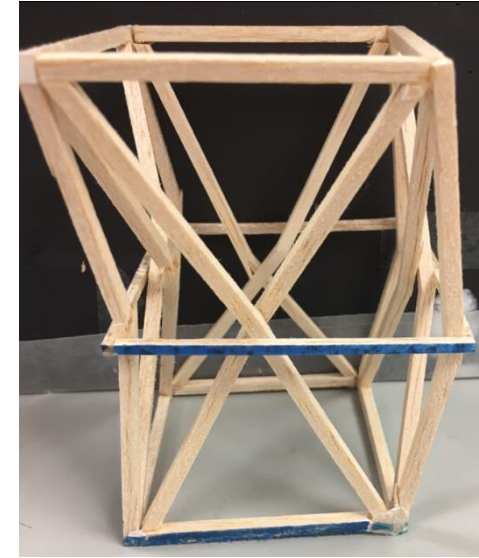
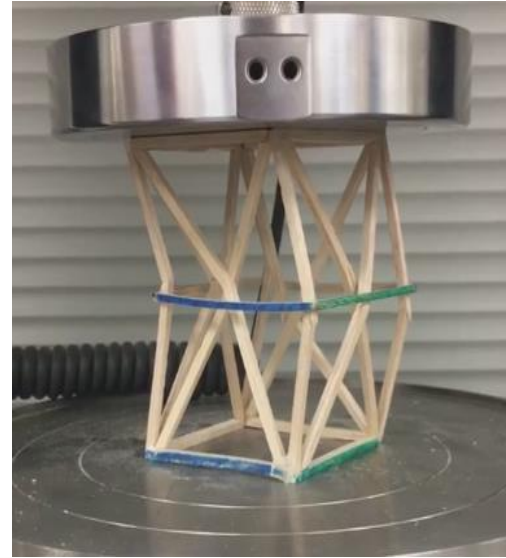
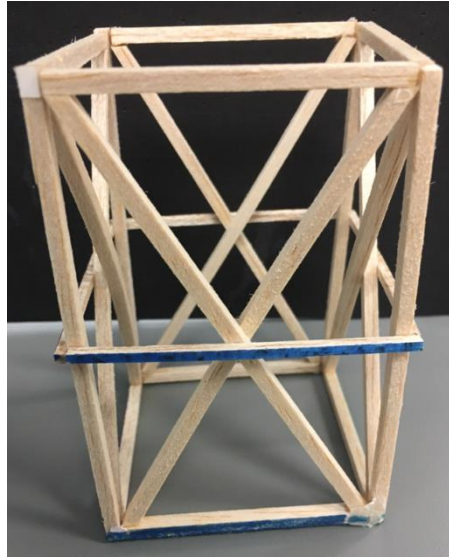
else if get global Stage == 1
  then set global TrueTime to PerfectForward.Time - get global InitialTime
```

MIT App Inventor



Fully Design FIRST Tech Challenge Robot

Other Projects



To Conclude

Difficulties Along the Way

- I am not an engineer
- There is minimal Professional Development targeted to K-12 Engineering teachers
- Change in mentality

In any case, I love what I do!



THANK YOU!