# **Connor Willgress**

connorwillgress@gmail.com

206-651-6063

## PROFESSIONAL SUMMARY

Mechanical engineering senior at WPI seeking a challenging professional career opportunity in Mechanical Engineering.

#### **EDUCATION**

#### WORCESTER POLYTECHNIC INSTITUTE

**Expected Graduation: Spring 2018** 

Bachelor of Science: Mechanical Engineering



#### **Related Courses:**

- Modeling and Analysis of Mechatronic Systems
- Engineering Experimentation
- Industrial Robotics
- Thermodynamic
- applications and design
- Design of Machine Elements
- Kinematics of Mechanisms

#### SKILLS

Engineering SoftwareAutodesk, MathCAD, MatLab, SolidWorks, CATIAApplicationsMicrosoft Office (Word, Excel, & PowerPoint)

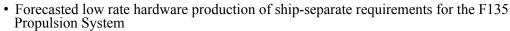
Programming LanguagesPythonForeign LanguageSpanish

## EXPERIENCE

### PRATT AND WHITNEY

F135 Program Management Office – East Hartford, CT





- Optimized and developed method for tracking efficiency by designing an automated tracker file used within the F135 Program Management Office
- 'ACE' associate certified in lean manufacturing practices

#### **PROJECTS**

## Robotic Scaffolding - Major Qualifying Project (MQP): August 2017 – May 2018

Develop two robots that work together to create given structures autonomously:

- "Scaffolding" to localize and communicate instructions to the builder robots
- "Builder" to traverse the scaffolding and place building blocks

## Interdisciplinary Qualifying Project (IQP): March – May 2017 Paraguay WPI Project Center, La Escuela Agricola de San Francisco

- Evaluated current biodigester. Designed and built new system to lower energy cost
- Performed a cost benefit analysis to determine the feasibility of a bakery business unit

## Design of Wind Turbine Main Shaft and Tower: January – March 2017

Completed finite element analysis to determine stresses of components within a V52-850 kW wind turbine while improving component design to minimize the concentrated and fatigue stresses from torsion and bending

### Dynamics of a V6 Engine vs. Tesla Electric Motor: August – October 2016

Developed a 3D digital and mathematical model of a V6 engine and a Tesla Electrical Motor to dynamic analyze both motors to compare efficiency and torque performance data

## Great Problem Solving (GPS): August 2014 - December 2014 People's Choice Award

Developed a comprehensive food sustainability plan for city of Worcester that created economic incentives and collaboration to supply healthier food

## **ACTIVITIES**

- NCAA Division III Men's Basketball Varsity Athlete
- Big Brothers Big Sisters of America: Volunteer Representative and Campus Lead for WPI
- Student Organizer for Central Mass Special Olympics Championship: 2015 and 2016