Connor Willgress

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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 Software	Autodesk, MathCAD, MatLab, SolidWorks, CATIA
Applications	Microsoft Office (Word, Excel, & PowerPoint)
Programming Languages	Python
Foreign Language	Spanish

EXPERIENCE

PRATT AND WHITNEY

F135 Program Management Office – East Hartford, CT

Intern: Summer 2017

- Forecasted low rate hardware production of ship-separate requirements for the F135 Propulsion System
- 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