

# ALEXANDRA Z. GOBELER

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## EDUCATION

**Carnegie Mellon University Entertainment Technology Center**  
**Master of Entertainment Technology**  
May 2019 | GPA 3.7

**Rowan University**  
**Bachelor of Science Mechanical Engineering**  
*Bioengineering & Honors Concentrations*  
May 2017 | GPA 3.8  
Magna Cum Laude

## SKILLS

**Engineering**  
SolidWorks, ANSYS, MATLAB, Simscape Multibody, Python, Raspberry Pi, Arduino

**Fabrication**  
Carpentry tools, lathe, mill, water jet, 3D printer, lasercutter

**Art**  
Maya, ZBrush, Illustrator, Premiere

**Management**  
Jira, Confluence, PLM

## PROFESSIONAL SOCIETIES

**Themed Entertainment Association**  
*NextGen Member*

**Tau Beta Pi**  
*Engineering Honor Society Member*

**Society of Women Engineers**  
*Rowan Chapter President*  
Dec. 2014 – Jan. 2016

## WORK EXPERIENCE

**Walt Disney World | Modeling, Simulation & Training Tools Engineering Intern**  
June – Dec. 2018 | Orlando, FL

- Provided support for animated figures in production by communicating with mechanical designers, show programmers, and animators to meet the needs of the project
- Developed kinematics models for animated figures and ride vehicles using MATLAB and Simscape Multibody
- Redesigned parts of animated figures in the field by analyzing the problem and designing a solution

**Walt Disney World | Modeling, Simulation & Training Tools Engineering Intern**  
May – Aug. 2016 | Orlando, FL

- Developed a MATLAB script to filter through strain data for an animated figure and determined areas in animation profile to be revised
- Analyzed structural parts of an animated figure using ANSYS FEA software in order to ensure parts are passing safety standards, as well as provide redesign suggestions to the designers
- Designed a part of a character mask using SolidWorks Surfacing Tools to enable work with complex geometries

## ENGINEERING DESIGN PROJECTS

**Improving Animatronic Interactivity | Independent Study | ETC Spring 2019**

- Prototyping an animated figure employing AI/machine learning software to improve guest-character interaction under a themed entertainment lens
- Designing software, hardware, character, mechanical design, and guest experience

**Otronicon Megabot | Mechanical Designer | Disney Fall 2018**

- Designed and built a small-scale 3D printed animatronic figure to teach children about opportunities in the STEM field at the 2019 Otronicon Interactive Technology Expo in Orlando, FL

**Give Kids the World Village | Mechanical Designer | ETC Spring 2018**

- Semester-long client project in which an installation was revitalized by redesigning a traditional bike cable driven puppet into a fully electric animated figure and show
- Responsible for designing figure in SolidWorks, hardware selection, assembly, & maintenance plan

**Pneumatic Air Engine | Rowan Fall 2015**

- Designed in SolidWorks and fabricated in machining lab using mill, lathe, water jet, and 3D printer

## CREATIVE DESIGN PROJECTS

**Google | Character Rigger, Animator, & Game Designer | ETC Spring 2019**

- Semester-long client project designing a game which employs a machine learning algorithm that takes videos of human motion and converts them into 3D in-game character animations
- Leading player experience design through prototyping, playtesting, and iterating

**Building Virtual Worlds | Experience Designer | ETC Fall 2017**

- Created several guest experiences and interactive props using VR & AR technology while working on multidisciplinary teams

**Disney Imaginations Competition | Team Lead & Experience Designer | Fall 2016**

- Redesigned an outdoor space at Rowan University to help students relax by combining art and engineering technologies