

# Catherine Powell

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## Experience

TAIT, Lititz, PA

June 2023 - August 2023

*Mechanical Design Engineering Intern*

- Created and detailed parts in AutoCAD for large projects in the live entertainment industry
  - Completed extensive work designing structural elements for a new installation in a large theme park
  - Communicated with other designers and project managers to ensure timely completion of projects
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## Education

**University at Buffalo**, The State University of New York

*Bachelor of Science*, Mechanical Engineering, expected May 2024

Theatre minor with Design/Technology concentration

GPA: 3.738/4.0, *magna cum laude*

**Education Abroad:** Ireland (Faculty-led theatre program, Summer 2022)

**Indiana University–Purdue University Indianapolis**

*Certificate*, Themed Entertainment Design, expected May 2024

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## Projects

**Titan IV Actuator Museum Exhibit Design**, University at Buffalo

Fall 2023 / Spring 2024

- Designed and prototyped an interactive display for a local museum with an unused rocket actuator
- Worked with teammates to perform structural analysis and develop a closed-loop controls system
- Awarded first place in a design presentation with more than 60 projects from the department

**Pandora's Box Roller Coaster Design**, Purdue University

Fall 2023

- Worked in a multidisciplinary team to conceptualize and design a story-driven roller coaster
  - Created queue layout and ride footprint with an existing show building and a proposed budget
  - Used SketchUp to create examples of displays and exhibits to engage guests throughout the queue
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## Other Experience

**Master Chong's World Class Tae Kwon Do**, East Amherst, NY

January 2018 - June 2023

*Senior Instructor*

- Instructed and coached Tae Kwon Do students of all ages and belt levels
- Assisted in organization and operation of special events such as fundraisers and competitions
- Trained and mentored junior instructors in weekly staff team meetings

**World Class Tae Kwon Do Summer Camp**, East Amherst, NY

June 2016 - August 2021

*Counsellor/Instructor*

- Engaged children with various activities and led groups during early and late camp running hours
  - Managed groups during field trips and oversaw safety of sports and active events
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## Skills

- Extensive experience in CAD software (SolidWorks, AutoCAD Mechanical, SketchUp)
  - Proficient in French language, New York State Seal of Biliteracy (English/French) (May 2020)
  - Good working knowledge of Microsoft Office (Excel, Word, PowerPoint) and Adobe Photoshop
  - Conversational American Sign Language, Spanish, and Brazilian Portuguese
  - OSHA Forklift Certification (July 2023)
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## Associations

Tau Beta Pi Engineering Honor Society

April 2024 - Present

Themed Entertainment Association

September 2023 - Present

UB Theme Park Engineering Club (TPEC)

September 2020 - Present

Women in Science and Engineering (WiSE)

September 2020 - Present