ARIELLE PFEIL

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EDUCATION

University of Illinois at Urbana-Champaign Graduation: **Dec. 2021**
Bachelor of Science in Mechanical Engineering, Minor: Bioengineering GPA: 3.47/4.00
Awards: Illinois Engineering Achievement Scholarship, Wittenstein Kevin Sanchez STEM Scholarship

WORK EXPERIENCE

Applied Biomaterials and Biomechanics Lab, UIUC **Urbana, IL**
National Science Foundation Research Experiences for Undergraduates ***June - August 2020***
Illinois Scholars in Undergraduate Research Scholar ***August 2019 - May 2020***

- Improved manufacturing time by more than 50% for a hydroxyapatite, biocompatible ink used for 3D printed bone scaffolds
- Analyzed powder samples with scanning electron microscopy and x-ray diffraction
- Fabricated multilayer rectilinear scaffolds using a direct-write, extrusion 3D printer controlled via MATLAB scripts

Apple **Cupertino, CA**
Audio Product Design Intern/Co-Op ***January - August 2019***

- Coordinated a 3-month LiveOn comfort study with 23 participants and performed acoustic tests for AirPods Pro
- Designed a subsystem assembly for preliminary, product reliability testing on an upcoming audio device
- Collaborated across cross-functional teams including Industrial Design, Manufacturing, Tooling, Reliability, and Acoustics

PSYONIC **Champaign, IL**
Mechanical Engineering Intern ***August - December 2018***

- Manufactured 3D printed, carbon fiber, and silicon-molded components for the Ability Hand™ (bionic hand for amputees)
- Implemented preliminary touch feedback sensors into molded finger prototypes

Fermi National Accelerator Laboratory **Batavia, IL**
QuarkNet Intern ***June - August 2017***

- Implemented a testing device to assist in tuning cosmic microwave background detectors on the South Pole Telescope
- Developed Python scripts for communication of test infrared emissions to bolometers (electromagnetic radiation detectors)

PROJECT HIGHLIGHTS

NASA L'SPACE Mission Concept Academy ***May - August 2020***
Professional development program introducing NASA mission protocols with weekly trainings from scientists and engineers

- Project co-lead on a team of 13 interdisciplinary students to design an exploration mission on Mars

Sol Flower ***January - May 2020***
Artistic, kinetic clock and sculpture portraying the natural motions of a sunflower with the passage of time

- Designed (PTC Creo) and prototyped (laser cutting and 3D printing) complex, dynamic mechanisms with intermittent motion

SKILLS & CERTIFICATIONS

Certifications Siemens NX (Version 1930) Certification
CAD/Software Siemens NX, PTC Creo, SolidWorks, Autodesk Inventor, Autodesk Fusion 360, MATLAB, Python, HTML, GitHub,
Prototyping & Testing 3D Printing, Laser Cutting, Soldering, Shop Tools, Scanning Electron Microscopy, X-Ray Diffraction

LEADERSHIP

Grainger Engineering First-Year Experience | *Lead & MechSE Engineering Learning Assistant* ***August 2019 - Present***

- Instructed 25 first-year mechanical engineering students in ENG 100 (Engineering Orientation) to help them become acclimated to the Grainger College of Engineering

Women in Mechanical Science and Engineering | *President, External Affairs Chair* ***August 2018 - Present***

- Increased participation of female MechSE students through professional development and social events

Society of Women Engineers | *Historian, Community Service Chair* ***August 2017 - Present***

- Photographed social and large (200+ attendees) SWE Illinois events and organized several community outreach activities