Ari Willig

ajw113@duke.edu | (786) 382-3287 | www.linkedin.com/in/ari-willig/

Education

Duke University, *Pratt School of Engineering* Durham, NC
- BSE in Biomedical Engineering / BA in Computer Science May 2026
- GPA 3.53

Professional Experience

Zimmer Biomet *Manufacturing Engineering Intern,* Warsaw, Indiana Summer 2025
- Designed new racking system to hold surgical instruments more effectively during cleaning; created technical protocols and reports to evaluate cleanliness of instrumentation; updated end-of-line process for 35 SKUs, saving $50,000 annually in scrap loss and repairing issues listed in dozens of nonconformance reports
- Used Lean Six Sigma A3 approach and statistical analysis to evaluate issues related to manufacturing efficiency, nonconformances, and end-of-line specifications; implemented improvement and control actions to ensure conformant product was released in accordance with specifications and in a timely manner
- Wrote 50+ First Article Layout forms for molds used in poly devices to address out of specification nonconformances and get production back up to 100%

Skeletal Dynamics, *R&D Engineering Intern,* Miami, FL Summer 2024
- Developed medical device instrumentation for the proximal humerus through SolidWorks that allows surgeons to repair high part proximal humerus fractures
- Created PDS, BOM, and Risk Analysis documents for the design history of instruments
- Machined out of specification parts and used heavy machinery to create necessary components for my design

Segura Lab, *Researcher,* Durham, NC 2022 - 2025
- Studying the formation of Neurospheres in hydrogel scaffolds (MAPs) and the effect of increasing void space on cell survivability

Ortho PRO Associates, *Intern,* Miami, FL 2020 - 2022
- Assisted in the evaluation, fabrication, and fitting of artificial limbs
- Assembled prosthetics using acrylic resin, carbon fiber, thermoplastics, silicone, aluminum, and titanium

Motorola Solutions, *Intern,* Plantation, FL Summer 2019
- Studied elements of mechanical engineering and sound wave transmission used to design satellite phones and worked with a team to design a forest fire prevention drone and build an electric model car

Academic Extra Curriculars / Relevant Projects

Duke Enable, *Club Member,* Durham, NC 2022 - Present
- Designed and 3D printed a functional prosthetic arm for amputees in the local community

HouseCourse Web Design, Durham, NC Fall 2024
- Designed a fully functional and shipped web application using Ruby on Rails and React

Medtech Design, Durham, NC 2024-2025
- Designed and prototyped CAD devices, Arduino based lightboxes and event-driven state machines using engineering principles and C++

Leadership and Community Service Experience

SAFTA, *Founder,* Miami, FL 2019 -2023
- Led a team of volunteers in assisting the elderly in navigating technological difficulties; visited elderly homes and did house calls to improve seniors' ability to connect with family members and friends

Relevant Coursework, Skills, and Interests

Coursework: Multivariable Calculus, Differential Equations, Physics Mechanics and Electromagnetics, Mechanics of Solids, Quantitative Physiology and Biostatical Applications, Intro to Python, Java Data Structures and Algorithms
Language: Fluent in both English and Spanish
Computer Skills: Fluent in Java; proficient in Python, C, C++, and Microsoft Suite; proficient in SolidWorks, Onshape, and CAD design
Interests: Rock Climbing | Guitar | Basketball | Yoga | Reading