**Ari Willig**

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# Education

**Duke University,** *Pratt School of Engineering* Durham, NC

* BSE in Biomedical Engineering / BS 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 100+ First Article Layout forms for molds used in poly devices to address out of specification defects, reduce nonconformance reports by 98%, and improve daily production by 25%

**Skeletal Dynamics,** *R&D Engineering Intern,* Miami, FL Summer 2024

* Developed medical device instrumentation for the proximal humerus through SolidWorks that allowed surgeons to repair high part proximal humerus fractures resulting in $40,000 annual increase in revenue
* 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

* Studied 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

**Computer Skills:** Proficient in SolidWorks, Onshape, and CAD design; Fluent in Java; proficient in Python, C, C++, and Microsoft Suite

**Language:** Fluent in both English and Spanish

**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

**Interests:** Rock Climbing | Guitar | Basketball | Yoga | Reading