

AADARSH M. SENTHIL

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EDUCATION

University of Florida Honors Program - GPA 3.9/4.0

Aug 2024 – May 2028

Bachelor of Science in Biomedical Engineering, Minor in Electrical Engineering

Gainesville, Florida

- Certificate: AI Fundamentals and Applications (Anticipated May 2028)
- *Relevant Coursework:* Clinically-Inspired Engineering Design, Engineering Mechanics: Statics, Biomedical Materials, Signals and Systems, Engineering Statistics (**R**), Computer Applications in BME (**Python**)

EXPERIENCE

R&D Design Intern

May 2026 – Aug 2026

ABB

Bloomfield, Connecticut

- Led full-cycle design of a **coil tester device** for LV circuit breakers, **replacing a non-compliant testing process** via CAD & electrical diagrams and UL-compliant V&V planning, **improving efficiency by 61%**.
- Produced **70+ engineering deliverables** in **Creo** and **Windchill** (including 3D assemblies, wiring schematics, BOMs, and a **DHF**), ensuring full **technical documentation** continuity for **regulatory compliance**.
- Executed 2 full build-test cycles with **verification & validation** and **safety testing** across thermal, dielectric, withstand, and short-circuit evaluations, successfully **completing 2 weeks ahead of schedule**.

Undergraduate Research Assistant

Jan 2026 – Present

Wireless Intelligent Sensor Electronics (WISE) Lab at UF

Gainesville, Florida

- Designing a **submersible transmitter enclosure** for in-vitro EQS channel testing, validating a **100× lower-power alternative** to RF communication for **implantable pacemaker system integration**.

Research Laboratory Intern

Aug 2023 – Feb 2024

Center for DNA-Guided Medicine

Hartford, Connecticut

- Performed **PCR, DNA extraction, quantification, and SNP genotyping** to analyze patient drug metabolism profiles, supporting personalized medication prescribing; **80+ clinical hours**.
- **Publication:** Senthil, A. 2024. Personalized Medicine: Mitigating Adverse Drug Reactions and Revolutionizing Healthcare. *Curieux Academic Journal*.

PROJECTS

Generational Relief in Prosthetics (GRiP) - Biomimetic Hand Team

Sep 2025 – May 2026

- Designed **actuation systems** and CAD assemblies for a **Medtronic-sponsored biomimetic prosthetic hand** as part of a 5-member team, incorporating EMG control and touch-sensitive prosthetic skin.

Generational Relief in Prosthetics (GRiP) - Drumstick Prosthetic Team

Jan 2025 – May 2025

- Assembled an **adaptive drumstick prosthesis** across **3 design-build iterations**, incorporating passive flexibility to achieve a precise fit upon delivery to a pediatric patient with a congenital hand difference.

SKILLS & CERTIFICATIONS

- **Programming:** Python, Java, MATLAB, R, Arduino
- **CAD/Engineering:** PTC Creo Parametric **Certified User**, Windchill, SolidWorks, Fusion360, BOM Development, DFMEA & Risk Analysis, Tolerance Stack-Up Analysis, Finite Element Analysis (FEA)
- **Laboratory:** Soldering, Electrical Circuit Testing, DNA Extraction, SNP Analysis, Wet-Lab Techniques
- **Other:** Agile Development, UL/ANSI/NEC Standards, EMG Signal Concepts, Adobe Creative Suite

LEADERSHIP

- **Vice President** of Phi Gamma Delta (FIJI), Sensory Substitution Glove **Team Captain** at Generational Relief in Prosthetics (GRiP), and **Treasurer** of Students Providing Art & Recovery Kits (SPARK)