AADARSH M. SENTHIL

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PROFESSIONAL SUMMARY

Honors Biomedical Engineering student at the University of Florida with hands-on experience in lab research, device prototyping, and interdisciplinary design. Passionate about advancing healthcare through biotechnology and medical device innovation.

EDUCATION

University of Florida - GPA 3.9/4.0 August 2024 - May 2027
Bachelor of Science in Biomedical Engineering, Minor in Electrical Engineering *Gainesville, Florida*

- Certificate: AI Fundamentals and Applications (Anticipated May 2027)
- *Relevant Coursework*: Engineering Statistics (**R**), Computer Applications BME (**Python**), Computer Programming (**MATLAB**), Engineering Mechanics: Statics, Computer Aided Graphics/Design (**Solidworks**)

LEADERSHIP

- **Vice President** of Phi Gamma Delta (FIJI), **Director** of First-Year Leadership Experience, and **Director** of Social Media at Biomedical Engineering Society

EXPERIENCE

Undergraduate Research Assistant January 2026 - Present
Wireless Intelligent Sensor Electronics (WISE) Lab *Gainesville, Florida*

- Conduct mannequin-based in-vitro measurements to characterize EQS human body communication channels for ultra-low-power implanted pacemaker systems.
- Build, solder, and test Tx/Rx hardware, analyzing signal attenuation and positioning effects to support a 100× lower-power alternative to RF communication.

Research Laboratory Intern August 2023 - February 2024
Center for DNA-Guided Medicine *Hartford, Connecticut*

- Conducted PCR, DNA extraction, DNA quantification, and SNP genotyping for patient genomics analysis, contributing to patient-specific metabolic and allele profiling while gaining **over 80 clinical hours**.
- Authored **Publication**: Senthil, A. 2024. Personalized Medicine: Mitigating Adverse Drug Reactions and Revolutionizing Healthcare. *Curieux Academic Journal*, 38(2), 202-209.

PROJECTS

Generational Relief in Prosthetics (GRiP) - Biomimetic Hand Team September 2025 – Present

- Sponsored by **Medtronic** to develop a biomimetic prosthetic hand focused on restoring total hand function through finger dexterity and touch-sensitive prosthetic skin.
- Engaged in CAD modeling, 3D printing, and material testing to prototype designs that replicate natural movement and tactile feedback.

Generational Relief in Prosthetics (GRiP) - Drumstick Prosthetic Team Jan 2025 - May 2025

- Engineered a **custom prosthetic drumstick device** for a young girl with a deformed hand, enabling her to play the drums.
- Collaborated with a team to design, prototype, and test **adaptive prosthetic solutions** using CAD modeling, and 3D printing.

SKILLS

- **Programming:** Python, Java, MATLAB, R
- **Engineering/Design:** CAD (OnShape, Fusion360, Solidworks), Biomechanics, Experimental Design
- **Laboratory:** DNA Extraction, Combinatorial Genotyping, SNP Analysis, Wet-Lab Techniques
- **Other:** IEEE Standards, Adobe Creative Suite (Premiere Pro, After Effects, Photoshop)