

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 - Herbert Wertheim College of Engineering August 2024 - May 2027
Bachelor of Science in Biomedical Engineering, Minor in Electrical Engineering Gainesville, Florida

- Overall GPA: 3.9/4.0
- Certificate: AI Fundamentals and Applications | Herbert Wertheim College of Engineering

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

Relevant Coursework: Engineering Statistics (**R**), Computer Applications BME (**Python**), Computer Programming (**MATLAB**), Engineering Mechanics: Statics, Computer Aided Graphics/Design (**Solidworks**)

WORK EXPERIENCE

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

- Developed and followed **SOPs** for nucleic acid extraction, polymerase chain reaction (PCR), and DNA quantification, ensuring precision and accuracy in all experiments while gaining **over 80 clinical hours**.
- Performed **Single Nucleotide Polymorphism (SNP) analysis** through combinatorial genotyping to calculate **metabolic reserve and allele alteration indexes** for genotypes of patients.
- 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.

ASME Biodesign Exoskeleton Team September 2024 - December 2024

- Worked on a multidisciplinary team to **design and prototype a functional lower body exoskeleton** aimed at enhancing mobility for emergency responders by researching biomechanical principles.

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)