

TOM TIGER

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EDUCATION

University of Memphis, Memphis, TN
Bachelor of Science, Biomedical Engineering

Expected Graduation: May 2026

- GPA: 3.7/4.0
- Relevant Coursework: Biomechanics, Biomaterials, Biomedical Signal Processing, Medical Imaging, Physiology for Engineers, Circuit Analysis, CAD for Medical Devices, Tissue Engineering

TECHNICAL SKILLS

- Software & Tools: MATLAB, SolidWorks, AutoCAD, Arduino, LabVIEW, Python, COMSOL (basic), ImageJ
- Lab Techniques: Gel electrophoresis, spectrophotometry, cell culture, microscopy, circuit prototyping
- Certifications: CPR/BLS Certified, Good Laboratory Practice (GLP) Training, ISO 13485 Awareness (if applicable)

RELEVANT EXPERIENCE

University of Memphis – Biomedical Engineering Lab
Biomedical Research Assistant

January 2024 – Present

- Designed and tested a wearable heart rate monitoring system using Arduino and photoplethysmography sensors
- Reduced signal noise by 30% through implementation of digital filters in MATLAB
- Documented results for an undergraduate conference presentation; project ranked top 10 among 50+ entries

Smith & Nephew, Memphis, TN
Intern – Medical Device Design Team

May – August 2024

- Assisted in prototyping a non-invasive glucose monitor using infrared spectroscopy
- Conducted failure analysis and usability testing across 10+ patient simulations
- Drafted FDA-compliant technical reports with design modifications based on feedback from clinical advisors

PROJECTS EXPERIENCE

3D-Printed Prosthetic Hand with EMG Control

Spring 2025

- Collaborated with a team of 4 to design a low-cost prosthetic hand controlled by muscle signals (EMG)
- Integrated MyoWare sensor signals into a servo-driven 3D-printed model using C++ and Arduino IDE
- Improved grip responsiveness by 20% compared to baseline prototype; presented at regional BME conference

Cell Culture Scaffold for Tissue Regeneration

Fall 2024

- Designed biodegradable scaffold using alginate hydrogel and tested cell adhesion properties
- Utilized microscopy and statistical analysis to measure cell proliferation rates over 14 days

VOLUNTEER WORK EXPERIENCE

St. Jude Children's Research Hospital
Volunteer

June to August 2024

- Supported patient intake and assisted with basic health screenings

CERTIFICATIONS & MEMBERSHIP

- Certified LabVIEW Associate Developer (CLAD), 2025
- Member, Biomedical Engineering Society (BMES)
- Member, IEEE EMBS (Engineering in Medicine and Biology Society)