

Lucas Geraldi-Smith

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EDUCATION

Bachelor of Science, Biomedical Engineering
University of Florida, Gainesville, FL

May 2025

RESEARCH EXPERIENCE

Intelligent Health Systems Lab – *Part-Time Research Assistant*

Sept. 2023 – Present

- Trained a large neural network for predictive and risk analysis of ICU patients, incorporating context sensing and situation-aware context communication to create an intelligent ICU
- Sustained an annotation pace of 800 per week, thereby safeguarding adherence to project deadlines
- Tracked script errors and possible improvements through a weekly report to eliminate inefficiencies and provided a medium for annotators to share their experienced shortcomings and limitations

Smart Medical Informatics Learning and Evaluation Lab – *Research Assistant Volunteer*

Jun. 2023 – Present

- Developed a MATLAB script to automate a part of the annotation process through Excel integration, increasing the productivity of over 20 annotators by 80% and improving the ease of use
- Synchronized completed annotations with existing data through shell scripting in a virtual network computing environment to improve data accessibility and readability for all annotators
- Annotated 4D CT scans for multiple arterial and venous locations, employing MATLAB scripts to train a generative adversarial network in creating CTP scans from contrast-free CT scans

Emerging Research Leaders Program – *Graduate*

Jan. 2023 – May. 2023

- Attended workshops held by experienced researchers to improve personal performance and productivity in research environments
- Collaborated with an accomplished PhD student to delve into his prior work on implantable oxygen sensors and explore his ongoing research in microparticle engineering

LEADERSHIP

Society of Hispanic Professional Engineers

Newsletter Director

Sept. 2023 – Present

- Migrated mailing service from Mailchimp to Beehiiv, utilizing SQL for database management to increase audience capacity from 500 to 2500 and broaden data collection ability
- Dispersed 50 internship and scholarship opportunities in 4 months to SHPE members through collaboration with other directors, providing valuable resources for members and their professional and academic development
- Implemented a member spotlight to increase newsletter exposure and readership, encouraging exponential growth through a member nomination form
- Transformed content and visual medium of the biweekly newsletter to offer more opportunities and increase accessibility and multi-device readability

SHPEducation Tutor

Sept. 2023 – Present

- Helped 20 students in MATLAB coursework through a minimum of 3 hours a week, fostering the academic growth of fellow SHPE members
- Developed notes and lesson plans for weekly sessions, emphasizing the personal understanding of the student and improving their individual problem-solving ability, rather than solely assisting in coursework

First Year Leadership Program

Oct.2022 – Dec.2022

- Collaborated in a team of six to plan a social event for a group of over 40 individuals, encouraging members to network and create both social and career connections
- Coordinated funding and venue reservation as well as food and activities through task delegation, ensuring the event went smoothly with weekly communication

TECHNICAL PROFICIENCY AND CERTIFICATIONS

- **Certifications:** Certified by the UF institutional review board to handle and process PHI
- **Software:** MATLAB, Python, SQL, HTML, knowledge of ML and neural network development

RELEVANT COURSEWORK

- Computer applications for biomedical engineering
- Computer programming for engineers
- Engineering statistics