Ella Mendelowitz

(813) 956-4441 | e.mendelowitz@ufl.edu | https://www.linkedin.com/in/ella-mendelowitz-935405252/

EDUCATION

Bachelor of Science in Biomedical Engineering/AI Certificate **Expected Graduation: Spring 2025**
University of Florida, Gainesville, FL
GPA: 3.90/4.00

RELEVANT COURSEWORK

Construction of a Cardiac Pacemaker **Fall 2023**

- Used different components such as bandpass filters, instrumentation amplifiers, 311 comparators, monostable and astable 555 timers, 4-bit counters, and NAND gates to construct a functioning pacemaker.
- Tested the system with function generator inputs and live biological ECG signals obtain from cardiac leads, and performed troubleshooting on the circuitry.

RESEARCH EXPERIENCE

Undergraduate Researcher with BEAT Cancer Lab, *University of Florida* **August 2023 – Present**

- Conducted data analysis of the correlation between test statistics and clinicopathological variables to determine clinical relevance of RNA splice variants and immune cell distribution in kidney cancer patients
- Identified kidney cancer biomarkers and their relationships to assess severity and generate a predictive algorithm for patient susceptibility and viable treatment options
- Explored the culturing and cultivation of cardiac fibroblasts, cardiac endothelial cells, and cardiomyocytes

Undergraduate Researcher with Dobson Lab, *University of Florida* **August 2022 – August 2023**

- Replicated the protocols from field research papers to seed cell cultures, and differentiated epithelial cells into neuronal cells for future nanomagnetic particle manipulation
- Conducted calcium imaging with florescent molecules to verify the differentiation procedures
- Created magnetic microdiscs and nanoparticles for experimentation

DESIGN EXPERIENCE

Cardiothoracic Subteam Leader, *UF Dream Team* **Dec. 2021 – Present**

- Created a 3D model showcasing Supraventricular Tachycardia using Solidworks, and integrated the design with electrical components to produce a teaching method for doctors at Shands

Dream Team Shadow **Aug 2021 – Dec 2021**

- Shadowed/assisted with the Diabetes VR, Berlin Heart, and Surgical Kidney teams

TEACHING EXPERIENCE

Chemistry TA (CHM2095), *University of Florida* **Aug 2022 – May 2023**

- Led 1 discussion section, held 2-3 exam reviews per semester, created answer keys, and helped students with assignments/questions pertaining to their independent design projects

INVOLVEMENT

Phi Sigma Rho (Engineering Sorority), *University of Florida* **Jan 2022 - Present**

Study Abroad, *University of Florida/Université Catholique de Lille* **June 2022- July 2022**

- Enrolled in Physics 2 and Engineering Art, and was featured at several art exhibitions

ROV (Remotely Operated Vehicle) Ambassador, *National Geographic* **Aug. 2017- August 2022**

- Learned how to code programs, construct, and control ROVs for underwater exploration
- Acted as a mentor for new classes, held positions as group leader and general speaker

SKILLS

- Software/Hardware: MATLAB, Solidworks, Leica Microscope Imaging, Arduino, circuit design
- Laboratory: Cell culture of epithelial cells in BSL-1 facility, differentiation processes, solution production, wet lab protocols, analysis of microscopy images, nanoparticle production, experimental design, presentation and analysis of experimental data