

Melvin Osei Opoku

Gainesville, FL 32612 | melvinoseiopoku@ufl.edu | +1 (678) 303-6791 |
<https://www.linkedin.com/in/melvin-osei-opoku/> | melvinoseiopoku.com

EDUCATION

Bachelor of Science in Biomedical Engineering, Minor in Electrical Engineering

University of Florida Honors Program, Gainesville, FL

May 2026
GPA: 3.82/4.0

WORK EXPERIENCE

Undergraduate Research Assistant

August 2023 – Present

Brain Mapping Lab, University of Florida, Gainesville

- Analyse neural data from Tourette patients in a Deep Brain Stimulation clinical study
- Develop machine learning algorithm for video-based automated detection of motor and vocal tics

Research Intern

June 2024 – August 2024

Murthy Lab, Princeton University, Princeton

- Computational analysis of Drosophila's neural wiring diagram to uncover neural computation of the visual system
- Mapped visual neurons' functional data to FlyWire's neural wiring diagram

Research and Development Intern

January 2023 – December 2023

American Society of Pharmacognosy, University of Florida, Gainesville

- Screened and biosynthesized 31 new terpene synthase functions, advancing biotech applications
- Conducted molecular docking and mutations of proteins to characterize enzymatic activity
- Co-authored two published research papers

LEADERSHIP & SERVICE

Product Designer

August 2023 – May 2024

Generational Relief in Prosthetics, University of Florida | Gainesville, FL

- Designed and optimized "Unlimbited" prosthetic arm using SolidWorks
- 3D printed and conducted non-destructive testing on prosthetic arm

Resident Assistant

August 2023 – Present

Housing and Residential Life, University of Florida | Gainesville, FL

- Devise events to encourage community belonging among 32 residents.
- Enforce community standards and policies to ensure a safe and supportive living environment
- Serve in an on-call rotation by responding to emergencies and crises

Undergraduate Teaching Assistant

August 2023 – December 2023

Secrets of Alchemy, University of Florida | Gainesville, FL

- Graded weekly lab reports and provided helpful feedback
- Held office hours to a class of 60 students: increasing grade by 20%
- Assisted instructor in preparing the lab, supporting students during lab, and cleaning up

Director of Interfaith Affairs

August 2022 – May 2024

Student Government, University of Florida | Gainesville, FL

- Program interfaith events to encourage a campus environment open to students of all faiths
- Ensure a cohesive relationship between 9 religious groups on campus through regular communication

SKILLS

- Programming:** Python, MATLAB, C++, R, JavaScript, HTML, CSS, Ruby, SLEAP.ai, Label Studio,
- Design & Analysis:** SolidWorks, Fusion 360, Connectomics, AutoDock Vina, Deep Learning, Biostatistics
- Laboratory:** DMA, TMA, PCR, Genetic Mutation, NMR data analysis, Molecular Docking, GC-Mass data analysis
- Software:** Microsoft Office, Adobe Photoshop, Premiere Pro, After Effects, InDesign
- Hardware:** Circuitry, PCB Design, KiCad,
- Language:** Fluent: English, Twi | Conversational: French

AWARDS/SCHOLARSHIP

- University Scholars Program- \$1750 research stipend **August 2024 – May 2025**
- Certificate of Outstanding Merit from the College of Engineering Award **November 2023**
- UF Hamilton Center Society Fellow- \$2,500 stipend and a funded trip to Oxford and Cambridge University **August 2023**
- American Society of Pharmacognosy - \$5000 research stipend **May 2023 –August 2023**
- Wentworth Travel Scholarship – \$500 Research Travel Funding **May 2023 – August 2023**
- Emerging Scholar Award- \$1000 research stipend **January 2023**
- Davis United World Scholar- \$192,000 fully funded University of Florida undergraduate degree. **August 2022 – May 2026**