Alex Goldstone

Amherst, MA • (617) 697-5704 • agoldstone@umass.edu • www.linkedin.com/in/alex-goldstone

EDUCATION

UNIVERSITY OF MASSACHUSETTS AMHERST COMMONWEALTH HONORS COLLEGE   **Amherst, MA**
Biology and Computer Science Double Major (BS, Dual Degree Candidate)   *Expected Graduation: May 2025*
GPA: 3.983/4.0

- Coursework: Machine Learning, Algorithms for Data Science, Mobile Health Sensing & Analytics (Python), Machine Learning (Python), Data Genomics Lab (R), Algorithms, Data Structures (Java), Data Management (SQL), Human Physiology, Software Engineering, Programming Methodology (JS), Physiology, Cancer Biology, Organic Chemistry w/ Lab, Comparative Vertebrate Anatomy Lab
- Completed Deep Learning, Machine Learning, and Signal Processing courses on MathWorks
- Sigma Chi Fraternity: served as scholarship chair on EBoard (1 year), tutored brothers and ran networking event
- Attended Modeling in Python, Web Design, and Linux workshops Hack(H)er413 2024

PROJECTS

FALL DETECTOR   *Nov-Dec 2023*

- Implemented and fine-tuned a machine learning model using Python's Pandas, NumPy, SciPy, and Scikit-learn libraries to analyze mobile accelerometer data in a conda environment
- Developed a robust system capable of distinguishing between physical activities (e.g. walking, running, standing) and specifically identifying instances of falls
- From Scikit-learn used butter, filtfilt, DecisionTreeClassifier, and train_test_split to intake and classify data
- Utilized Matplotlib for visualizing activity patterns, aiding in the interpretation of the model's predictions

EEG EMOTION DETECTION (thesis)   *July 2024-May 2025*

- Using Earable Neuroscience's FRENZ Brainband to obtain EEG signals to analyse brainwaves and attempt to classify emotions and other EEG signals
- Utilizing Python and MATLAB to record and process data as well as create machine learning models
- Currently researching hunger signals, will move to stress and anxiety other emotions ideally by December

RELEVANT EXPERIENCE

NURSING ENGINEERING LABORATORY   **Amherst, MA**
UNIVERSITY OF MASSACHUSETTS AMHERST   *May 2024-Present*

- Assist PhD students with data analysis in MATLAB, namely writing scripts to process and filter data to isolate integrated sympathetic nerve activity (iSKNA) from ECG signals
- Aide in data collection, varying from biking wearing electrodes to aquatic therapy activities with waterproof sensors

RESIDENT ASSISTANT   **Amherst, MA**
UNIVERSITY OF MASSACHUSETTS AMHERST   *August 2023-May 2024*

- Provide support to residents ranging from academic, social, and mental health resources to addressing conflict
- Plan and collaborate with staff to execute building events, such as trivia and self care nights
- Engage with residential community and foster a supportive, inclusive living environment

TEACHER'S ASSISTANT, SUMMER PROGRAM COUNSELOR, LAB MANAGER'S ASSISTANT   **Wellesley, MA**
BOSTON LEADERSHIP INSTITUTE   *May 2021-July 2022*

- Co-led Green Chemistry Research class with management, taught laboratory skills and terminology to high school aged students, and maintained a positive learning environment
- Created and maintained inventory lists and closets for over sixty classes, gathered supplies for classes, and oversaw classroom purchases
- Planned and executed group activities including trips to Harvard Square and Boston Museum of Science

SKILLS

Programming Languages: Python, SQL, Java, JavaScsript, R, C
Tools: MATLAB, GitHub, RStudio, MySQL
Soft Skills: Leadership, Problem Solving, Communication, Organization, Time Management