James Sheehan

http://www.jamessheehan.net/ | sheehan.james48@gmail.com | 781-460-7431

EDUCATION

University of Vermont (UVM), Burlington, VT   Anticipated May 2022
Bachelor of Science in Biomedical Engineering, Minor in Computer Science
- President of the Vermont Chapter of the Delta Upsilon Fraternity (2020-2021)
- Member & Campus Outreach Chair for the Society of Biomedical Engineers

Relevant coursework: Brain-Computer Interfaces, Algorithm Design & Analysis, Advanced Programming: C++, Data Structures & Algorithms, Biomedical Diagnostic Techniques, Clinical Engineering, Data Science

PROFESSIONAL EXPERIENCE

Research Assistant, **Glass Brain Laboratory,** UVM   December 2020 – Present
- Assisted P.I. in designing and developing a study to analyze EEG & eye tracking data collected during a P300 visual oddball task comprising of 3D modeled human faces displaying various emotional states.
- Designed an EEG signal processing data pipeline using MATLAB & the EEGLAB toolbox. Pipeline included multiple filters, rejecting channels through automatic and manual methods, ICA, and calculating the differences in Target/Nontarget ERPs for each condition.
- Using an HTC Vive Pro Eye virtual reality headset and Unity game engine, modelled experimental environment to mimic real-world setting while still maintaining tight control & maintaining synchronized data streams.

Sales Representative, **Vector Marketing,** Andover, MA   May 2019 – January 2020
- Reached over $30,000 in personal sales through conducting in-person product demonstrations with prospective clients.
- Managed database of customer's purchase data and maintained up-to-date knowledge of sales strategies and product offerings to maximize up-sell potential.

Product Development Intern, **Headway LLC,** Boston, MA   February 2020 – April 2021
- Worked with Neurologists, Psychologists, Pediatric Specialists, and decision makers in the medical community.
- Analyzed clinical outcomes of implementation in various sectors with limited supervision, designed education & training materials to support staff training and continued education regarding product upkeep & safety.

RELATED EXPERIENCE

Lead Developer, **Intact Digitized Sketchpad SEED Project,** E.A.S.Y LLC   Fall 2021 – Present
- Led team in creating a software web application using SCRUM framework to interface with an existing tactile sketchpad product that served various purposes in the education and accessibility sectors.
- Designed application pages for a digital sketchpad and menu editor which extensively used JavaScript, HTML, and provided high level menu management. Utilized elements such as HTML Canvas and Artyom voice recognition.
- Completed prototype demonstrations with various stakeholders and end users to get feedback on product improvement.

Teaching Assistant, **Human-Machine Interfaces,** UVM   Spring 2022
- Demonstrated a human-machine interface to replicate mouse movements/clicks on a computer using arm muscle (EMG) input recorded by Myoware Biosensors.
  - Using the Adafruit IO cloud service & a BlueFruit Feather microcontroller, developed an additional application for the human-computer interface to send an Android SMS message over Bluetooth when triggered by EMG response.
  - Explained functional applications and methodology of the created technology to participants during a live demonstration at UVM.

Brand Representative, **Shudder TV,** AMC Networks   March 2022 – June 2022
- Communicated with media, produced digital content for Instagram, and represented the company & brand at various University events.
- Designed give-away contests and promotional events on social media to encourage follower interaction & engagement.

TECHNICAL SKILLS

Programming: Python (Scikit-Learn/NumPy/Pyserial), Java, HTML, JavaScript, React, CSS, MATLAB, C++, Git/GitHub, Unity, R
- EEG & EMG Biosignal Processing & Analysis, Machine Learning Algorithms, Virtual Reality, REVIT, Solidworks, Microsoft Word & Excel, Agile Frameworks: SCRUM