Ila Vienneau

ilavienneau.com | ivienneau3@gatech.edu | 336-549-8409

Education

Georgia Institute of Technology, Atlanta, GA **Expected May, 2021**
Bachelor of Science in Computer Science
Concentration in Devices and Intelligence
GPA: 3.61

Work Experience

Undergraduate Research at Keilholz Lab, Emory **November 2017 – May 2018**

- Worked to develop an algorithm which uses unsupervised machine learning techniques to detect signal patterns that can be used in detection of neural pathologies.
- Utilized a t distributed neighbor embedding algorithm written in MATLAB to detect clusters of patterns.
- Transformed fMRI data from the time domain to the frequency domain using a continuous wavelet transform in MATLAB.

Research and Development Intern at MiMedx **July, 2017 - August 2017**

- Characterized the elution of growth factors and cytokines from membranous and micronized forms of a placenta-derived tissue allograft product EpiFix in different eluents.
- Verified and quantified the presence of anti-microbial peptides—specifically the defensin superfamily—in MiMedx products and fresh tissue to increase understanding of immunogenic properties of MiMedx products.
- Characterized polyhydramniotic amniotic fluid in comparison to normal amniotic fluid to determine the feasibility of accepting fluid and tissue from donors with the condition polyhydramnios for use in MiMedx products.

Project Experience

Misophonia Pain Mitigation **Fall 2018 Hack GT – Present**

- Created a prototype for a device which selectively noise cancels triggering sounds to protect the user from induced panic.
- Transformed environmental sounds recorded via a microphone via Fourier Transform to compare result to identifiers stored locally on an Arduino Mega to provide noise cancelation in the case of a match.
- Moving forward, we plan to implement a feature that allows the user to record triggering sounds which will be sent to a cloud platform where machine learning techniques will be used to identify identifiers of triggering sounds to be stored locally.

Febrile Seizure Detection **August, 2017 – December 2017**

- Gained data analysis and hardware design skills by working in a small team to design, model, and build a novel device for the detection of febrile seizures and protection from associated head injuries in infants 6 months to 3 years of age.

Skills and Interests

Technical: data analysis, machine learning, algorithm development, website design, SolidWorks.
Languages: Proficient in Java, MATLAB, and Excel. Intermediate in C and Linux. Experience with Python, JavaScript, HTML, and CSS.
Research: Proficient in the following: project presentation, report writing, ELISA, BCA assay, Gel Electrophoresis, Multiplex ELISA, Western Blotting, eluting/dialyzing/lyophilizing/concentrating samples, etc.

Campus Involvement

Girls Who Code **August, 2018 – Present**

- Gained leadership skills by volunteering to teach coding workshops to elementary and middle school students.