

# Ila Vienneau

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## Education

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**Georgia Institute of Technology, Atlanta, GA**

**Expected May, 2020**

Bachelor of Science in Computer Science  
Concentration in Devices and Intelligence  
GPA: 3.61

## Work Experience

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**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

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**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

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**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

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**Girls Who Code**

**August, 2018 – Present**

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