

Education

Georgia Institute of Technology

Expected, May 2021

B.S. Computer Science - Artificial Intelligence & Devices

Minor: Biomedical Engineering

GPA: 3.64

Skills

General: Full Stack Web Development, Machine Learning, Data Analytics, Signal Processing, Circuit Design, Microservices, CAD

Languages: Python, Java, C, Assembly, VHDL, MATLAB, SQL, Angular, JavaScript, CSS, HTML

Libraries: TensorFlow, Keras, NumPy

Environments: AWS, Docker, Unix, Linux

Work Experience

Goldman Sachs

Richmond, VA

Summer Analyst, Earmark Project – Alternative Investment Manager Selection (AIMS) Tech

July 2020 - August 2020

Earmark is a tool-suite on the private equity side of AIMS built to assist the Investment Team in trading options and equity swaps to hedge public company exposure and to evaluate performance of general partners.

- Built the Earmark Hedge tool UI to display private company performance information and analysis of current market data, update hedges, and calculate actions to recommend the best action to hedge company exposure. This includes a feature to auto-populate an order planning tool to carry out the trades corresponding to the recommended action. (Angular, AG-Grid)
- Built a RESTful API to get current market information and company position on accounts from GS Securities Database (SecDB) and other internal tools to hydrate the UI with data. (JSI, SQL)
- This tool replaces the current process of manual data entry and calculations in a series of disjoint tools such as Excel. By automating this process, this tool will save the team at least 30 minutes of prep time per trade, eliminate errors in data entry and calculation, and capture data for use in performance analysis.

Capital One

Richmond, VA

Data Engineering Intern, Card and Small Business Tech - Gallery Department

June 2019 - August 2019

Gallery is the interface between customers and developers at Capital One. Among other responsibilities, it receives 9000 - 15000 paper and fax customer documents daily from which metadata is manually extracted to create cases and service customer needs.

- Built a Convolutional Neural Network (CNN) model for classification of scanned images of ingested documents (Python).
- Combined machine learning models and OCR technology to create a service that could partially automate the document ingestion pipeline within Gallery with respect to document classification and metadata extraction.
- Updated and tested microservices used in the document classification pipeline.
- Held meetings with international vendors providing Optical Character Recognition (OCR) and Intelligent Character Recognition (ICR) software and compiled reports on their accuracy for our use case to inform future decisions of vendor selection.

Georgia Institute of Technology

Atlanta, GA

Teaching Assistant, CS 1332 - Data Structures and Algorithms

January 2019 - Present

- Hold weekly 1.5-hour recitations teaching core concepts for approximately 50 students as well as 3+ hours of office hours weekly open to 600+ students to teach core concepts.
- Grade and provide feedback on homework assignments and exams (Java).
- Utilize J-Unit testing to test data structures that students build in homework assignments.

Emory University

Atlanta, GA

Undergraduate Researcher, Keilholz Laboratory

November 2017 - May 2018

Keilholz Lab is a computational neuroscience research lab dedicated to characterizing the dynamics of neural functional connectivity in the resting state of pathogenic and non-pathogenic human brain states.

- Evaluated signal processing techniques such as continuous wavelet transforms and Fourier transforms to recommend future methods for pre-processing fMRI data as an input to computational models.
- Built a model using t-distributed stochastic neighbor embedding (t-SNE) to extract patterns in Blood Oxygen Level Dependent (BOLD) signal in the resting state of the brain in non-pathogenic states. This algorithm is now used by the lab to identify patterns which characterize non-pathogenic brain states (MATLAB).

Product Development

Check out my website ilavienneau.com for more details on these passion projects and more!

- Telemedicine Application to provide refugees of Southern Cameroon with healthcare consultations
- Responsive Head Cushion for Febrile Seizure Detection and Protection
- Selective Noise Cancellation Headphones for protection against panic response in Misophonia Sufferers