MARLEY XIONG

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EDUCATION

MCGILL UNIVERSITY *B.Sc. Biology & Computer Science* 2016 - 2020

Cumulative GPA: 3.98

Applied Machine Learning, Computational Neuroscience, Algorithms and Data Structures

WORK EXPERIENCE

X, THE MOONSHOT FACTORY *Machine Learning Intern* Jun 2019 - Present

Research team in early-stage project

GOOGLE *Software Engineering Intern* Oct 2018 - Jan 2019

Implemented C++ MapReduce pipelines for analysis and visualization of YouTube ads data and user interactions

Ran simulations to study the impact of possible policy changes on revenue

Recommendations were validated by later experiments and lead to launches

IBM *Extreme Blue Technical Intern* May - Aug 2018

Designed, architected and prototyped tool for hospital workers to stream medical and location data

Integrated data and analytics from IBM Watson and IBM Streams; created real-time data display with React and D3; presented product and business plan to IBM C-level executives for commercialization

COGNIXION *Research & Development Intern* Jan - Apr 2018

Collected EEG data using different headsets, electrodes, and stimuli and explored novel machine-learning algorithms for SSVEP detection, increasing classification accuracy by 5 - 10%

Created processing pipeline and real-time analytic tools for SSVEP using Python

PERIGEN *Machine Learning Intern* May - Aug 2017

Prepared and tested LSTM neural network for real-time classification of fetal heart rate in hospitals

Evaluated ways to integrate Tensorflow with existing system, designed and saw through full implementation of standalone module for classification, achieving a 99% match with research model results

PROJECTS

CHATTERP *1st Place, NeuroTechX Open Challenge* Jan 2018 - Present

Led team of 6 in development of end-to-end P300 speller with predictive text capacity to allow people with disabilities to communicate, receiving $1500 in grants for our pitch

Iteratively tested and implemented signal processing and linear classifiers for EEG data from the OpenBCI

PSYCHIC PUCK *Winner, IEEE SMC Brain Hackathon* Oct 2017

Controlled the motion of a robotic puck using real-time alpha EEG intensity as measured by the Muse headband; analyzed data in Python and communicated through Bluetooth and OSC

FACE TO SONG *Microsoft Prize & 3rd Place Overall, PearlHacks* Feb 2018

Developed a web app that selects and plays a theme song for each person recognized on camera

Used Spotify API to find songs by mood and Microsoft's Cognitive API to recognize faces and facial characteristics

AWARDS

International Biology Olympiad Silver Medal

IEEE SMC Brain Hackathon Student Competition Winner

Google Games 2018 2nd Place

LEADERSHIP

President of McGill NeuroTech

VP Communications of Computer Science Council

Computer Science Undergrad TA

PUBLICATIONS

Xiong M, Zeeshan H, Prosser S. Biodegradable nanoparticles for cancer drug delivery. Poster session presented at: International Conference & Exhibition on Advanced & Nano Materials; 2016 Aug 1-3; Montreal, QC

SKILLS AND OTHERS

C/C++, Python, JavaScript, Java, MATLAB, SQL, Bash, XML, HTML/CSS, SPSS, Unix