

Sajad Darabi

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Education

Department of Computer Science **University of California Los Angeles**
Ph.D. student at eHealth and Data Analytics Lab UCLA 2016–2020.

Department of Engineering **McGill University**
B.Eng Electrical - graduated with distinction, CGPA 3.98/4.0 (up to W2016) 2013-2016

Skills

Languages: Python, Java, C, C++, MATLAB, Javascript, HTML/CSS

Tools/Frameworks: Android, Django, Bootstrap, SK-Learn, Cadence

Interests/Background: Machine Learning/Data Mining, Signal Processing, Embedded Systems, IoT

Selected Projects

Complex Event Processing in RT: real-time processing framework for predicting heart failure risk and stress. System used apache spark for big data streaming processing, apache kafka for publish/subscribe, signal processing/ml for predicting heart risk/stress. team member: mohammad kachuee, sandeep singh

PreREK: A web app that allows users to create learning trees. The learning trees bring structure to the learning process of any user that is interested in tackling new topics. Website designed using Django framework and Bootstrap HTML/CSS. The Learning trees are created using XML generated by draw.io and displayed using the D3.js API.

Predicting Jump Air Time: Trained various models: KNN regression, regularized regression, random forest and used feature elimination, as well as ensemble methods to predict jump height of a person. Used python and sklearn package. Team member Mohammad Kachuee.

Experience

eHealth & Data Analytics **UCLA**
Graduate Student Researcher August 2016-May 2017.

- Creating machine learning models to predict training load of athletes. Using python, sk-learn, pytorch.
- Developed data collection platform (heart rate/jump sensors) and android application (15000+ lines).
- Implemented signal processing algorithm for extracting features from PPG signals. System deployed at UCLA athletics.

McGill Broadband Communications Lab **Montreal**
Research Assistant May 2015 - February 2016

- Programmed ESP8266 Wi-Fi/MCU modules in C (2000+ lines of code). Implemented MANET algorithms and protocols on toy race cars to simulate Vehicle to Vehicle communication.
- Programmed serial and UART drivers for ESP8266 to interface with medical sensors.
- Determined throughput and link reliability of ESP8266 Wi-Fi modules.

CompEM Lab McGill **Montreal**
Software Developer May 2014 - October 2014

- Implemented in MATLAB (2000+ lines of code) delay and sum (DAS) as well as (DMAS) signal processing algorithms for image reconstruction to detect breast cancer tumors. Detected tumors with 88% accuracy in breast phantoms.
- Implemented GUI in MATLAB (2000+ lines of code) for facilitating the entry of various parameters and data processing.

Teaching

Introduction to Machine Learning - CM146A **Los Angeles**
Teaching Assistant Fall 2017

Introduction to C++ - CS31 **Los Angeles**
Teaching Assistant Summer 2017

Awards & Honors

- **NSERC Graduate Student Scholarship** - Awarded to exceptional undergraduates with research potential (highly selective) 2016
- **Dean's Honour list** - top 5% engineering faculty 2013-2016.
- **NSERC Scholarship** - Research scholarship, first class A- average requirement 2015
- **Motorola Scholarship** - awarded to engineering student with high standing 2015
- **Brodeur Drummond Scholarship** - overall contribution to student life & high standing 2015
- **Richard Brown Scholarship** - High academic standing 2014
- **Clifford Knowles Bursary** - Distinguished academic standing 2014
- **J B Woodyatt Scholarship** - Awarded to outstanding undergraduate 2014
- **Mary Gilsig Scholarship in Engineering** - Awarded to student with high academic standing 2014
- **Prompt Quebec Scholarship** - Research scholarship 2014
- **Faculty of Engineering Scholarship** - top 5% in all Faculty of Engineering 2013
- **John V Galley Scholarship** - Awarded to distinguished academic student 2013

Miscellaneous

Languages: English (Native), French (Native), Persian (Professional), Azeri Turkish (Professional).

Citizenship: Canadian.