Dany Haddad

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EDUCATION

University of Texas at Austin

Bachelor of Science, High Honors Electrical Engineering May 2015

Master of Science, Electrical Engineering: Decision, Information, and Communications Engineering

Courses: Large-Scale Optimization, Convex Optimization, Data Mining, Stochastic Processes

(Spring 2018:) Natural Language Processing, Large-Scale Learning, Monte Carlo Methods May 2019

WORK EXPERIENCE

University of Texas Austin, TX

Graduate Research Assistant — Intelligent Data Exploration and Analysis Lab August 2017 — Present

- Implementing GPU based real-time multi-object tracking for self-driving cars.
- Implementing a video background extraction algorithm which leverages structured sparsity inducing norms.
- Graduate data science teaching assistant (Spring 2018)

Originate Los Angeles, CA

Software Engineer, Technical Lead March 2016 — June 2017

- Transitioned the data model of a 20 kloc codebase from a schema-less Firebase data-store to a PostgreSQL database utilizing a GraphQL API.
- Developed a scalable and reliable data aggregation backend for a commercial real estate search tool.
- Contributed to Exosphere, an open-source framework for building distributed microservice oriented software projects.

MPR Associates Alexandria, VA

Electrical Engineer August 2015 — March 2016

- Built a software toolset to interface a 10 MW battery based renewable energy storage facility.
- Analyzed the modes of operation of a fault detection system for nuclear power plants.
- Wrote a software library to help engineers model nuclear power plants and generate simulation parameters for different contingency conditions.

SKILLS

- Experience building solvers for: logistic regression, SVMs, neural networks and robust optimization.
- Ability to apply cross-validation for tuning hyper-parameters.
- Experience with PCA, basis-expansion and feature selection.
- Experience using random forest, KNN, naive-Bayes and clustering models.
- Understanding of bias-variance trade-off.
- Proficient in Python, MATLAB and LabVIEW for data analysis.
- Proficient SQL and No-SQL database user.
- Proficient in Clojure.
- Experience with Apache Spark.
- Understanding of how to select the most appropriate model for a task given a set of constraints.

INDEPENDENT PROJECTS

- Developing an automated circuit analysis tool.
- Built a melody extraction tool for transcribing polyphonic music.
- Contributor to multiple open source Emacs Lisp tools.
- Contributor to Tertestrial, a software testing framework.
- Contributor to core.matrix.complex, a Clojure library for working with complex valued matrices.
- Contributor to StumpWM, written in Common Lisp.