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: Data Science and Machine Learning

Courses: Machine Learning, Data Mining, Unsupervised Learning and Greedy Algorithms
Time Series Analysis, Large-Scale Optimization — May 2019

WORK AND RESEARCH EXPERIENCE

Cognitive Scale — Austin, TX

Data Scientist — January 2018 — August 2018

- Determined the most appropriate model for a multi-label classification problem with noisy labels.
- Implemented ideas from LIME to improve the interpretability of a classifier.
- Determined trends and seasonalities in clickstream data to provide recommendations for SEO.

University of Texas — Austin, TX

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

- Improved state of the art defense mechanisms against adversarial examples for neural networks.
- Investigating Extreme Value Theory in incrementally trainable classification models.
- Implemented GPU based multi-object tracking for self-driving cars.
- Explored methods to improve the robustness of neural network based commonsense reasoning models using adversarial training.
- Explored time series analysis techniques with robustness guarantees under arbitrary noise.

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.

SKILLS

- Ability to understand and reproduce the relevant parts of academic papers.
- Experience building solvers for: logistic regression, SVMs, neural networks and robust optimization
- Understanding of feature extraction and selection techniques, cross-validation, and model selection methodology
- Clear and thoughtful communicator and mediator
- Proficient in Python, Clojure, Javascript and its variants.
- Proficient with `tensorflow`, `numpy`, `pandas` and `scipy`.
- Proficient SQL and No-SQL database user.
- Experience with XGBoost
- Experience with Apache Spark.
- Experience writing CUDA GPU code.

INDEPENDENT PROJECTS

- Developed an automated electronic circuit analysis tool.
- Built a melody extraction tool for transcribing polyphonic music.
- 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.