

Tyler McDonnell

DATA SCIENTIST

☐ XXX-XXX-XXXX | ✉ tmcdonnell@utexas.edu | 🌐 http://tylermcdonnell.com | 📱 tylermcdonnell

Lies, damned lies, and statistics.

Experience

IR & Crowdsourcing Laboratory

Austin, TX

RESEARCH ASSISTANT

Jan. 2017 - Present

- Developing crowd-based (e.g., Amazon Mechanical Turk) IR evaluation methodologies which incorporate supervised learning.
- Designed a reinforcement learning-based paradigm for collecting and aggregating crowd labels using task features.

Ketra

Austin, TX

START-UP ENGINEER

May 2013 - Aug. 2016

- Constructed regression models using scikit-learn for improving customer network topologies built using Ketra IoT devices.
- Spearheaded wireless R&D leading to 5x increase in stable network size and simplified UX across all wireless product lines.
- Designed and implemented ultra lightweight C embedded file system used across Ketra ARM Cortex M-3 embedded portfolio.
- Architected and built a C-based, synchronized, real-time dynamic lighting playback system for wired/wireless product lines.
- Extensive full-stack development and debugging of company pilot products spanning: C, C++, C#, Python, Hadoop, ZigBee

Azul

Austin, TX

ENGINEER

Nov. 2012 - May 2013

- Prototyped a logistic regression-based user-client affinity model in Python/R for a "reverse-bidding" mobile application.
- Blueprinted post-cold start collaborative filtering approach for future recommendation system.

Projects

RYB: Popular Music Analysis

Present

- Developing tools for visualizing music industry trends over time using Scala, Apache Spark, and Apache Zeppelin.

Multi-Task Deep Representation Learning

2016

- Investigation of shared-layer deep architectures for learning across related tasks under sparse data using TensorFlow.

SynAnt

2016

- Supervised and unsupervised models for resolving antonymy in co-occurrence word embeddings using sentiment-inspired contexts. Built using Python, SKLearn, NLTK, CoreNLP, & the VADER rule-based sentiment analysis suite.

GASP: Graduate Admission Support Program

2013

- Developed predictive models used to evaluate graduate applicants at the University of Texas at Austin using application features and historical data. Primary models were based on logistic regression and random forests using SKLearn.

Education

The University of Texas at Austin

Austin, TX

M.S. IN COMPUTER SCIENCE

Aug. 2015 - Dec. 2017

- Machine Learning & Crowdsourcing. GPA: 3.8/4.0

The University of Texas at Austin

Austin, TX

B.S. IN COMPUTER ENGINEERING WITH SPECIAL HONORS

Aug. 2009 - May 2013

- Computer Architecture & Real-Time Systems. GPA: 3.9/4.0

Skills

- **Technologies I Use Frequently:** Python, Pandas, SKLearn, SQL, NLTK, CoreNLP, C, C#, Java, AWS
- **Technologies I Am Learning:** Apache Spark, MLib, Scala, TensorFlow
- **Courses:** Machine Learning, Natural Language Processing, Reinforcement Learning, Information Retrieval, Databases
- **Awards:** Google FUSE Leadership Scholarship, AAAI Human Computation 2016 Best Paper Award, Graduate Fellowship