

William B. Held

MACHINE LEARNING & NATURAL LANGUAGE PROCESSING

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Education

Georgia Institute of Technology

Atlanta, GA, United States

Ph.D. in Machine Learning

Aug. 2021 - PRESENT

- Research focused on natural language processing for low-resource languages and dialects advised by Prof. Diyi Yang

New York University Abu Dhabi

Abu Dhabi, United Arab Emirates

3.73 GPA B.S. in Computer Science with a concentration in Economics

Aug. 2015 - May 2019

- Research focused on semantic relation extraction and Arabic computational linguistics under Prof. Nizar Habash

Publications

2021 **Applying Discourse Coherence Theory to Cross Document Coreference**, W. Held, D. Iter, D. Jurafsky *EMNLP Main*

2019 **The Effectiveness of Simple Hybrid Systems for Hypernym Discovery**, W. Held, N. Habash *ACL Main*

2017 **Transitioning Green-Gauss Gradients to the Kokkos Framework**, W. Held, A. Bradley *CCR Summer Proceedings*

2016 **Testing Framework for a Hybrid Triangular Solver**, W. Held, A. Bradley *CCR Summer Proceedings*

Professional Experience

Sunshine/Lumi Labs

Palo Alto, CA, United States

Software Engineer - Machine Learning

June 2019 - June 2021

- Engineer assigned to research partnership with Prof. Dan Jurafsky co-reference resolution
- 9th engineer hired to build out AI-powered applications focused on everyday consumer problems
- Applied natural language processing research on text chunking and information extraction in novel text domains

Foursquare

New York, NY, United States

Machine Learning Engineer Intern - Pilgrim Data Team

May 2018 - Aug 2018

- Added new signals for FourSquare Pilgrim designed to improve prediction accuracy in areas with low or no data
- Ingested and filtered 3rd party data into Foursquare's Hadoop training pipeline while maintaining data quality

Knotch

New York, NY, United States

Data Scientist - Knowledge Search Engine

May 2017 - February 2018

- Wrote a document classifier using a hierarchical attention network to discover and index branded content on the internet
- Built infrastructure for training neural networks and serving predictions to clients in real time

Quorum Analytics

Washington, D.C., United States

Software Engineering Intern - User Accounts and Permissions

January - May 2017

- Built new frontend and backend account management tools which allowed clients to self-manage team permissions
- Maintained pipelines that ingested state legislator voting history from all 50 states

Sandia National Laboratories

Albuquerque, NM, United States

Research Intern - Computer Science Research Institute

May - August 2015

April - August 2016

- Implemented a multi-GPU atmospheric gradient calculation for the Sandia Parallel Aerodynamics and Reentry Code
- Automated multi-threaded performance testing for high performance computer code to simplify writing tests

Independent Activity

Loga

Abu Dhabi, United Arab Emirates

Technical Project Lead

January 2016 - December 2017

- Led a project to train and employ refugees as annotators for Arabic optical character recognition via mobile phones
- Featured in the Dubai Design Week Global Grad Show as an example of Machine Learning design applications

hackNY

New York, NY, United States

Fellow

May - August 2017

- Chosen as one of 28 fellows for a program that introduces young technologists to the NYC startup ecosystem
- Returned in 2018 as a volunteer team lead for Fellows on a data analysis project for Usdan Summer Camp for the Arts