

EMPLOYMENT

RESEARCH ASSISTANT **INITIALDLAB, UNIVERSITY OF UTAH** **AUGUST 2016-PRESENT**

- Produced and completed a B.S. Thesis on the Analysis of Scalable Topic Modeling in Latent Dirichlet Allocation. Reduced network load by 55% on a state of the art distributed topic modeling system by implementing a token passing map routing system.
- Co-author on Compass, a spatiotemporal sentiment analysis system that was used to predict the 2016 US Presidential Election, county by county and state by state. Accepted for oral presentation at KDD 2017.
- Directed the development efforts of five other research assistants as team lead for STORM, a spatiotemporal data analytics platform.
- Currently researching recurrent neural networks for sequence-based anomaly detection in system logs.

SOFTWARE ENGINEER **CONSULTING** **AUGUST 2014- AUGUST 2016**

- Directed work for a team of four other software engineers and one project manager for the architecture, design, implementation and testing efforts of a major feature in an existing system.
- Designed and developed a custom UI generator with MongoDB and Node JS, which led to the automation of custom page creation for a branch of the State of Nevada's digital library.
- Wrote custom API integrations for an enterprise logistics platform. Facilitated the transition to a platform focused on e-commerce.

SOFTWARE ENGINEER **ROCK SOLID INTERNET SYSTEMS** **MAY 2012 - AUGUST 2014**

- Managed MySQL database; wrote and optimized queries for a search and reporting platform.
- Led the refactoring effort to migrate from a Flex-based UI to React JS.
- Pair-programmed a secure API to streamline the customer ordering process.

EDUCATION

SALT LAKE CITY, UT **UNIVERSITY OF UTAH** **JANUARY 2015 - MAY 2019**

- M.S. in Computing, Data Management Track, expected May 2019. GPA: 4.0
- B.S. in Computer Science, August 2017. GPA: 3.72
- Graduate Coursework: Information Extraction; Database Systems; Machine Learning.
- Undergraduate Coursework: Natural Language Processing; Artificial Intelligence; Math for Data; Computer Security; Databases; Algorithms; Linear Algebra; Calculus III; Operating Systems.

TECHNICAL EXPERIENCE

PROJECTS

- **Distributed Topic Modeling System** (2017). Scalable, distributed unsupervised machine learning system to learn topic distributions over documents and words with large data. Handcrafted an asynchronous, non-locking, distributed token passing architecture and modified Fenwick tree for fast sampling. Python, Pyro4
- **Event Extraction System** (2017). Supervised machine learning system to summarize news articles about corporate mergers by using a series of Naïve Bayes classifiers to fill event roles. Python, XML
- **Co-reference Resolution System** (2016). System to resolve co-references in an annotated, domain-agnostic dataset using a hierarchy of semi-deterministic heuristics, ranked top 3% in a competition of 70 other students. Python, XML
- **Auto Price AI** (2016). Logistic regression program to suggest the price at which a car should be sold, using data from local classified ads. Python, Scrapy

LANGUAGES AND TECHNOLOGIES

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- Python (proficient), Java, C/C++ (previous experience), JavaScript, CSS/HTML (proficient), Git (proficient), Github, MySQL/SQL, Matlab (previous experience), Node JS, React JS
 - Natural Language Processing, Numpy, Scikit-Learn, Scrapy, Topic Modeling, Machine Learning, LaTeX