

EDUCATION

B.S. Computer Science with Minor
Political Science
University of Washington – Seattle, WA
Expected Graduation: June 2020
GPA: 3.83

M.S. Computer Science

University of Washington – Seattle, WA
Expected Graduation: June 2021

SKILLS

Proficient: Python, Java, C/C++, R, Javascript, SQL, Tensorflow, PyTorch, NumPy, Scikit-learn, gensim, nltk, AllenNLP, pandas, Matplotlib

Basic Proficiency: MS Azure, AWS, GCP, React.js, AsterixDB (SQL++)

WORK EXPERIENCE

Research Assistant | Noah's ARK @ Paul G. Allen School of CSE | Summer 2019 - Present

- NLP research on how the media discuss "hate speech" over time with Prof. Noah A. Smith
- I work with very large text corpora (10G – 100G+) e.g. NYT, and news sites.
- I research into popular methods to discovering changes in meaning of concepts by reading technical papers, as well as political and historical essays on hate speech for theoretical grounding.
- I discovered meaningful trends by conducting experiments using NLP techniques such as point-wise mutual information, topic models, part-of-speech tagging, GloVe, word2vec, and BERT embeddings.
- I effectively communicate my findings through visualizations using seaborn and Matplotlib.

Teaching Assistant | Paul G. Allen School of CSE | Spring & Summer 2019

- 2 Quarters of CSE 373 Data Structures and Algorithms taught in Java.
- Covered computational complexity, data structures (e.g. hash tables, graphs, disjoint sets) and algorithms (e.g. sorting, Dijkstra's, PageRank), git, and Unit tests.
- I wrote project infrastructure code, conducted sections and office hours, graded homework and exams.

Software Engineering QA Intern | TIBCO Inc. | Summer & Fall 2018

- I built test automation pipelines for my team to easily test new product builds and see test results.
- I created Jenkins pipelines with R, Bash, and Windows PowerShell scripts to run automated tests. These results were reported to a SQL database and could be queried using an R package I built or visualized through a customized TIBCO Spotfire analysis.
- The tool was adopted for internal use and significantly increased the number of automated tests available to assure product quality.
- In addition, I authored comprehensive assertion tests for several R packages.
- I also authored two technical deep learning articles published on TIBCO community website.

SELECTED PROGRAMMING PROJECTS

Contextual and Numerically Augmented QANet (CNAQANet) | NLP Capstone Project | Spring 2019

- Developed NLP model for machine question answering based on NAQANet (Dua et al. 2019).
- Given a question about a passage, the model can answer the question by reasoning on multiple pieces of information in the passage.
- Achieved new *state-of-the-art* machine reading comprehension performance on a challenging new dataset — Discrete Reasoning Over Paragraphs (DROP).

Mini-Java Compiler | CSE 401 - Compiler Construction | Fall 2018

- A (mini) Java compiler featuring floating point types, class inheritance, and dynamic dispatch.
- Built all major components of a compiler, including scanner, parser, type checker, and code generator.
- Runs basic Java programs such as binary search, quick sort, etc.

ML Flow | Personal Project | 2017 – 2018

- I am deeply interested in Machine Learning so I created this side project to practice implementing various machine learning frameworks on my own.
- This project is a basic machine learning framework that is modeled after Google's TensorFlow, which allows you to build and train machine learning models.
- I implemented computation graph, automatic differentiation and several optimization algorithms such as gradient descent and Adagrad in Python and NumPy.

Threaded Dependency Engine for Machine Learning | CSE 599W - Systems for ML | Winter 2018

- A computation graph executor and scheduler for speeding up computations.
- My teammate and I implemented the scheduler based on the implementation of MXNet's dependency engine. It speeds up computation by scheduling operations which do not share resources on different threads so that they run in parallel. We built the front-end using Python and backend with C++.

Serve-It | Hackathon Team Project | Fall 2017

- Our product enables charitable donations through anonymous texting.
- My team ran a Python server through ngrok, which users can communicate to through text via Twilio. User information was saved on Firebase. After determining the user's location, the user is paired with someone in need of resources (ie. food, clothes, etc) who is close in proximity to the user using Google Maps API. The pair can text each other anonymously using our server as a proxy to arrange a pickup in real life.

LEADERSHIP EXPERIENCE

President / Dance Teacher | **Swing Kids at UW** | Fall 2017 — Present

- I manage a team of 8 that serves the the swing dance club at UW.
- I oversee swing dance lesson coordination, budgeting, funding, marketing, team bonding events, and local dance community engagement; I coordinate events attended by 100+ people every quarter.
- I teach all levels of swing dancing to class size that varies from 5 - 20 people.