

TAM DANG

EDUCATION

PAUL G. ALLEN SCHOOL OF
COMPUTER SCIENCE &
ENGINEERING

University of Washington

M.S. in Computer Science (in progress)

Expected graduation — Spring 2019

B.S. in Computer Science — class of 2018

COURSEWORK

Machine Learning & NLP

- CSE 546: Machine Learning (in progress)
- CSE 481N: NLP Capstone
- CSE 490R: Robotics
- CSE 472: Computational Linguistics
- CSE 427: Computational Biology
- CSE 446: Machine Learning

CS Fundamentals

- CSE 505: Programming Languages (in progress)
- CSE 421: Algorithms
- CSE 451: Operating Systems
- CSE 333: Systems Programming
- CSE 332: Data Structures

PROGRAMMING

Proficient — Python · Java · Git

Familiar — C/C++ · Haskell
Racket · Ruby

CONTACT

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🌐 dangitstam.github.io

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EXPERIENCE

Natural Language Processing Research Assistant | NOAH'S ARK — Seattle, WA

- Conducting research to improve semi-supervised representational learning of text to produce strong text classifiers while leveraging unlabelled data using neural and Bayesian methods
- Research advised by Noah Smith as part of the NLP group "Noah's ARK" within the UW NLP group

Machine Learning Research Intern | XEVO, INC. — Bellevue WA, Summer 2017

- Introduced a trainable natural language understanding engine to solve intent and slot prediction, translating text of spoken utterances into actionable labels
- Integrated tools for NLP into Xevo's existing machine learning framework, including tokenization and text normalization using NLTK and trainable word embeddings using TensorFlow
- Implemented Alexa Brain's OneNet Joint SLU model using Xevo's frameworks (<https://arxiv.org/abs/1801.05149>), which combines orthographic and semantic features via character-level and word-level RNNs and jointly optimizes on intent and slot prediction

Software Engineering Intern | PAYSACLE, INC. — Seattle WA, Summer 2017

- Created a service that suggests online courses from massive open online courseware providers to PayScale users based on their skills using React JS and the ASP.NET framework
- Developed and conducted A/B tests using VWO and Google Analytics

CSE 341 Teaching Assistant | UNIVERSITY OF WASHINGTON

- Assisted in running the spring 2017, autumn 2017 offerings and currently assisting in the autumn 2018 offering of the *Programming Languages* course, which teaches functional programming paradigms using SML/Racket and contrasts their nuances against imperative style programming
- Duties involve holding recitation, grading, helping students through office hours, attending weekly meetings, collecting student submissions from Google Drive via the Google Drive API and producing auto-generated feedback using the joint 341/Coursera auto-grader Docker container

PROJECTS

Le Traducteur — Summer 2018 (Personal)

- A neural machine translation framework including an implementation of Sutskever et al.'s Sequence to Sequence Learning with Neural Networks (<https://arxiv.org/abs/1409.3215>)
- Built with Pytorch and AllenNLP, provides functionality for training models using parallel datasets with full support for Europarl

TopicRNN: A neural Topic Model & RNN Hybrid — Winter 2018 (Academic)

- Implemented Dieng et al.'s TopicRNN (<https://arxiv.org/abs/1611.01702>): a model for language modeling and feature extraction, which jointly learns an RNN language model along with latent topics using variational inference
- Includes model implementation complete with an objective function optimizing ELBO loss and a custom training loop for truncated backpropagation through time
- Written in Python using AllenNLP and PyTorch

Twitter Part-of-Speech Tagger — Winter 2018 (Academic)

- Implemented Hidden Markov Models and the Viterbi algorithm to produce the most probable sequence of part-of-speech tags given a tweet using Python and NumPy
- Implementation through vectorization and storage of pre-computed transitions, emissions, and paths in matrix form allowed considerable speed up compared to a conventional implementation