

Joshua Tanner

NLP Engineer

Education

M.S. Comp. Linguistics
University of Washington
2019/9 - 2021/12

Research Practicum
University of Tokyo
2020/12 - 2021/12

B.S. Computer Science
The Evergreen State College
2012/9 - 2015/4

Exchange Program
University of Hyogo
2014/4 - 2015/4

Courses

Graduate

NLP 1 (Shallow Processing)
NLP 2 (Deep Processing)
Machine Learning for NLP
NLP Systems and Applications
Neural Language Models
Information Extraction
English Syntactic Theory
Japanese Syntax and Semantics
Phonetics

Undergraduate

Operating Systems
Networks
Android Development
Japanese 1 & 2

Technologies

Proficient:

Python spaCy
Scala Java
Ruby

Familiar:

AllenNLP Pytorch
fairseq Play Framework
SQL Ruby on Rails

Languages

English - Native
Japanese - Fluent (JLPT N1)

Experience

Research Intern

Octanove Labs
2020/6 - 2020/10

- Train multilingual multitask seq2seq models for translation and grammatical error correction using fairseq
- Implement an ensemble of language identification models to clean and filter data with heavy code switching

Software Engineer

New Product Development & Global Growth

eBay

2016/11 - 2019/9

- Lead development of, tested, and maintained sole ownership of the Scala distributed scheduler that powered proactive messaging for eBay ShopBot and eBay's Chinese iPhone app
- Implemented a bootstrapping NLP process to extract informative noun/adjective pairs from product reviews, using Python and spaCy (based on "RevMiner" paper)
- Developed a Ruby on Rails web service that allowed non-technical users to customize and schedule proactive messages from ShopBot to users

Software Engineer

Global Shipping Program

eBay

2015/9 - 2016/11

- Rearchitected the pipeline used to import shipping charge data from shipping partners, increasing the accuracy of international shipping prices on eBay's search results page by up to 40%
- Maintained and developed new features in Java/Spring services at scale (several million requests per hour), wrote tests using JUnit and Mockito
- Drove an effort to automate excessive manual operations work, saving the Global Shipping Program team tens of hours of work per week

Intern

Global Data Infrastructure

eBay

2013/6 - 2014/9

- Took ownership of and greatly expanded the functionality of a Ruby on Rails application automating Hadoop permissions changes and other operational tasks

Graduate Coursework

Machine Learning for NLP

Implemented machine learning algorithms for text classification such as decision trees, naive bayes, and KNN. Partial implementations and other work on maximum entropy models, support vector machines and neural networks.

Neural Language Models

Designed an experiment to determine how well BERT and other neural language models comprehend idiom paraphrases, fine tuning the models and training probing classifiers with PyTorch.

NLP 1 & 2

Implemented NLP algorithms such as n-gram language models, HMM part of speech tagging, probabilistic context free grammar generation and CKY parsing.

Awards and Projects

eBay Amplify Presenter

2018/05/7

A paper on information extraction research I conducted as a side project was accepted for presentation at eBay's internal research conference (25% acceptance rate).

Innovation Expo Presenter

2016/06/24

Our hackathon team's Node.js service which turned representative n-grams from web pages into affiliate links was chosen for presentation at eBay's internal innovation expo (14% acceptance rate).

Parasite

2009

Developed a StarCraft 2 mod which at peak averaged two million plays per week, later onboarding another developer and two community managers.