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
Japanse 1 & 2

Technologies

Proficient:
Python   spaCy
PyTorch   Scala
Java   Ruby

Familiar:
Rust   SQL
Play Framework Ruby on Rails

Languages

English - Native
Japanese - Fluent (JLPT N1)

Experience

Graduate Intern   Octanove Labs, Fuku Inc, Mantra Inc
Research & Infrastructure   2020 - 2021

- Implemented an efficient character-level transformer from recent research in PyTorch, pre-trained it for Japanese, and open sourced it
- Rewrote information extraction pipeline using spaCy, increasing micro f1 by more than 20 points
- Set up logging and monitoring using AWS and Sentry

Software Engineer   eBay
New Product Development & Global Growth   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   eBay
Global Shipping Program   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   eBay
Global Data Infrastructure   2013/6 - 2014/9

- Owned 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 comprehends 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
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 to help.