## Yoshinari Fujinuma

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Education

University of Colorado Boulder, USA

August 2016 - Present

Advisor: Michael J. Paul; Second year Computer Science PhD student

University of Tokyo, Japan

Sep. 2014

M.S. in Information Science and Technology

Advisor: Akiko Aizawa; Thesis: Detecting Upsurge of Emotion Using Characteristic

Expressions in Tweets

International Christian University, Japan

March 2012

B.A. in Computer Science and Mathematics

Advisor: Grant Pogosyan; Thesis: Fault-Tolerant Packet Routing Algorithms on Hy-

percube Networks

Experience

Research Assistant, University of Colorado Boulder, USA Aug. 2016 - Present

- Co-PI: Jordan Boyd-Graber
- Created cross-lingual embeddings using character-level LSTM to exploit orthographically similar words across different language pairs and to transfer resources in high-resource languages into low-resource languages.
- Domain-specific multilingual term extraction on low-resource languages using word embeddings and label propagation. Tried to incorporate multiple word-to-word relations and optimized their importance of relations using stochastic optimization where 1— F1-score was used as the objective function.

Software Engineer, Amazon/A9.com, Japan

Oct. 2014 - Aug. 2016

- Built JA/ZH language detector for search queries with recall > 0.8.
- Built a semi-supervised CRF-based Japanese query label tagger with F1 = 0.91.

Software Engineer Intern, Amazon/A9.com, Japan

Nov. 2013 - Feb. 2014

- The first search engineer to intern at Amazon Japan.
- Detected Japanese-English transliteration pairs with F1 > 0.9 using EM algorithm.

Part-time Engineer, Atilika, Japan

Aug.- Nov. 2013, Apr.- Sep. 2014

- Built a dictionary with over 8000 product names for Japanese named entity extractor.
- Built transliteration generator from English to Japanese. Achieved around 60% in accuracy@1.

Sofware Engineer Intern, Cookpad, Japan

July 2013 (one month)

• Built a recommendation system for related topics on the community site. Accomplished approximately 1.5% of the whole user click rate. Ruby on Rails.

Publications

• Yoshinari Fujinuma, Alvin Grissom II: "Substring Frequency Features for Segmentation of Japanese Katakana Words with Unlabeled Corpora", International Joint Conference on Natural Language Processing, Nov. 2017 (to appear)

- Yoshinari Fujinuma, Hikaru Yokono, Pascual Martínez-Gómez, Akiko Aizawa: "Distant-supervised Language Model for Detecting Emotional Upsurge on Twitter", The 29th Pacific Asia Conference on Language, Information and Computation, Nov. 2015
- Yoshinari Fujinuma: "Detecting Japanese-English Transliteration Pairs in Search Query and Clickthrough Logs", Amazon Machine Learning Conference, May 2015 (Internal)

## **Projects**

## Extending multiview embeddings for Twitter users

2016

- We extend the WGCCA-based user embeddings (https://github.com/abenton/wgcca) by incorporating additional user features.
- Revealed that users who follow many users tend to follow more users.

## Finite State Transducer (FST) for Kuromoji

2015

- Replaced a double-array trie to an FST to build a dictionary for Kuromoji, a java-based Japanese tokenizer used in Lucene, Solr, and Elastic Search.
- Github link: https://github.com/atilika/fst

Academic Honors Dean's Fellowship (CU Boulder)

2016

Best Bachelor thesis in CS and Math (Gödel Foundation Prize)

2012

Computer and Language Skills

Languages: Proficient: Python, Java; Intermediate: C++,

Pig, Go

Software: DyNet, Git, Vim, LATEX, MySQL

English: TOEFL iBT 101 (2015)