

Adithya Renduchintala

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INTERESTS I am broadly interested in problems at the intersection of (Deep) Machine Learning, Neural Machine Translation, Natural Language Processing, & User Modeling

EDUCATION PhD, Computer Science 2013 - Dec. 2019 (exp)
Johns Hopkins University, Baltimore, MD
Advisor: Philipp Koehn

MS, Computer Science 2010 - 2012
University of Colorado, Boulder, CO

MS, Electrical Engineering, Arts Media and Engineering 2005-2008
Arizona State University, Tempe, AZ

BE, Electrical Engineering 2001-2005
Anna University, SRM Engineering College, Chennai, India

PUBLICATIONS [Simple Construction of Mixed-Language Texts for Vocabulary Learning](#)
Adithya Renduchintala, Philipp Koehn and Jason Eisner. Annual Meeting of the Association for Computational Linguistics (ACL) Workshop on Innovative Use of NLP for Building Educational Applications, 2019 (To Appear).

[Pretraining by Backtranslation for End-to-End ASR in Low-Resource Settings](#)
Matthew Wiesner, **Adithya Renduchintala**, Shinji Watanabe, Chunxi Li, Najim Dehak and Sanjeev Khudanpur, Interspeech 2019 (To Appear)

[A Call for prudent choice of Subword Merge Operations](#)
Shuoyang Ding, **Adithya Renduchintala**, and Kevin Duh. Machine Translation Summit 2019 (To Appear).

[Character-Aware Decoder for Translation into Morphologically Rich Languages](#)
Adithya Renduchintala*, Pamela Shapiro*, Kevin Duh and Philipp Koehn. Machine Translation Summit 2019 (To Appear).

[The JHU/KyotoU Speech Translation System for IWSLT 2018](#)
Hirofumi Inaguma, Xuan Zhang, Zhiqi Wang, **Adithya Renduchintala**, Shinji Watanabe and Kevin Duh. The International Workshop on Spoken Language Translation 2018 (IWSLT)

[Multi-Modal Data Augmentation for End-to-End ASR.](#)
Adithya Renduchintala, Shuoyang Ding, Matthew Wiesner and Shinji Watanabe, Interspeech 2018. **Best Student Paper Award (3/700+)**

[ESPnet: End-to-End Speech Processing Toolkit](#)
Shinji Watanabe, Takaaki Hori, Shigeki Karita, Tomoki Hayashi, Jiro Nishitoba, Yuya Unno, Nelson Enrique Yalta Soplín, Jahn Heymann, Matthew Wiesner, Nanxin Chen, **Adithya Renduchintala** and Tsubasa Ochiai, Interspeech 2018.

[Knowledge Tracing in Sequential Learning of Inflected Vocabulary](#)
Adithya Renduchintala, Philipp Koehn and Jason Eisner, Conference on Computational Natural Language Learning (CoNLL), 2017.

[User Modeling in Language Learning with Macaronic Texts](#)
Adithya Renduchintala, Rebecca Knowles, Philipp Koehn, and Jason Eisner. Annual Meeting of the Association for Computational Linguistics (ACL) 2016.

* Equal contribution

[Creating interactive macaronic interfaces for language learning](#)

Adithya Renduchintala, Rebecca Knowles, Philipp Koehn, and Jason Eisner. Annual Meeting of the Association for Computational Linguistics (ACL) Demo Session 2016.

[Analyzing learner understanding of novel L2 vocabulary](#)

Rebecca Knowles, **Adithya Renduchintala**, Philipp Koehn, and Jason Eisner, Conference on Computational Natural Language Learning (CoNLL), 2016.

[Algerian Arabic-French Code-Switched Corpus](#)

Ryan Cotterell, **Adithya Renduchintala**, Naomi P. Saphra and Chris Callison-Burch. An LREC-2014 Workshop on Free/Open-Source Arabic Corpora and Corpora Processing Tools. 2014.

[Using Machine Learning and HL7 LOINC DO for Classification of Clinical Documents](#)

Adithya Renduchintala, Amy Zhang, Thomas Polzin, G. Saadawi. American Medical Informatics Association (AMIA) 2013.

[Collaborative Tagging and Persistent Audio Conversations](#)

Ajita John, Shreeharsh Kelkar, Ed Peebles, **Adithya Renduchintala**, Doree Seligmann Web 2.0 and Social Software Workshop in Conjunction with ECSCW. 2007.

[Designing for persistent Audio Conversations in the Enterprise](#)

Adithya Renduchintala, Ajita John, Shreeharsh Kelkar, and Doree Duncan-Seligmann. Design for User Experience. 2007.

EXPERIENCE

Johns Hopkins University, Baltimore, MD

2013-Present

Research Assistant

Design and evaluate AI foreign language teaching systems. Developed novel target-side character-aware extension to neural machine translation. Performed analysis of Byte-Pair Encoding and its effect on translation in different neural MT architectures. Evaluated speed vs. accuracy trade-offs in Statistical Machine Translation.

Duolingo, Pittsburgh, PA

Summer 2017

Research Intern

Prototyped a Chatbot system that detects and corrects word-ordering errors made by language learners. Explored spelling-error robustness of compositional word embeddings

M*Modal, Pittsburgh, PA

2012-2013

NLP Engineer

Developed SVM based clinical document classification system. Worked on feature engineering for statistical models (Document Classification, Entity Detection, Tokenization, Chunking)

Rosetta Stone, Boulder, CO

2008-2012

Software Developer

Designed, prototyped and evaluated speech recognition based games and applications for language learning. Prototyped a image-to-concept relation visualization tool for second language vocabulary learning.

Avaya, Lincroft NJ

Summer 2007

Research Scientist Intern

Developed an interactive graph based visualization tool to explore and annotate conference calls in enterprises.

Arizona State University, Tempe AZ

2006-2008

Research Assistant, Arts Media & Engineering

Designed and prototyped systems for serendipitous interactions in distributed work-places.

TEACHING Neural Machine Translation Lab Session, JSALT Summer School Summer 2018
Machine Translation, Teaching Assistant Spring 2016
Intro. to Programming for Scientists & Engineers, Teaching Assistant Fall 2013

PROGRAMMING Advanced: Python (numpy, scipy, scikit-learn)
Proficient: Java, C/C++, Javascript, JQuery, NodeJs
Deep Learning Frameworks: PyTorch (Advanced), MxNet, Tensorflow
Deep Learning Toolkits: OpenNMT, Fairseq, ESPNet, Sockeye

NATIONALITY Indian, Permanent US Resident

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