Adithya Renduchintala

adithya.r@gmail.com
arendu.github.io

Interests	I am broadly interested in problems involving sequence modeling in Natural Language Processing, Machine Translation and Speech Recognition.

Education

PhD, Computer Science	**2013 - 2020**

Johns Hopkins University, Baltimore, MD
Advisor: Philipp Koehn
Committee: Philipp Koehn, Jason Eisner, Kevin Duh

MS, Computer Science	**2010 - 2012**

University of Colorado, Boulder, CO
Advisor: Jim Martin (Non-Thesis)

MS, Electrical Engineering, Arts Media and Engineering	**2005-2008**

Arizona State University, Tempe, AZ
Advisor: Winslow Burleson

BE, Electrical Engineering	**2001-2005**

Anna University, SRM Engineering College, Chennai, India

Experience

Facebook AI, Menlo Park, CA	**2020-Present**

Research Scientist
Working on problems related to Neural Machine Translation.

Johns Hopkins University, Baltimore, MD	**2013-2020**

Research Assistant
Designed and evaluated AI foreign language teaching systems. Also worked on Machine Translation and End-to-End Speech Recognition.

Duolingo, Pittsburgh, PA	**Summer 2017**

Research Intern
Prototyped a Chatbot system that detects and corrects spelling and word-ordering errors made by language learners.

M*Modal, Pittsburgh, PA	**2012-2013**

NLP Engineer
Developed an SVM based clinical document classification system. Designed features for statistical models performing Document Classification, Entity Detection, Tokenization and 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 workplaces.

Publications   Multilingual Neural Machine Translation with Deep Encoder and Multiple Shallow Decoders.
Xiang Kong, **Adithya Renduchintala**, James Cross, Yuqing Tang, Jiatao Gu and Xian Li. European Chapter of the Association for Computational Linguistics (EACL), 2021 (To Appear)

Quality Estimation without Human-labeled Data.
Yi-Lin Tuan, Ahmed El-Kishky, **Adithya Renduchintala**, Vishrav Chaudhary, Francisco Guzman, Lucia Specia. European Chapter of the Association for Computational Linguistics (EACL), 2021 (To Appear)

Machine Translation quality across demographic dialectal variation in Social Media.
Adithya Renduchintala and Dmitriy Genzel. Association for Machine Translation in the Americas (AMTA), MT User Track, 2020.

An Exploratory Study on Multilingual Quality Estimation.
Shuo Sun, Marina Fomicheva, Frédéric Blain, Vishrav Chaudhary, Ahmed El-Kishky, **Adithya Renduchintala**, Francisco Guzman and Lucia Specia. Asia-Pacific Chapter of the Association for Computational Linguistics (AACL-IJCNLP), 2020.

Spelling-Aware Construction of Macaronic Texts for Teaching Foreign-Language Vocabulary.
Adithya Renduchintala, Philipp Koehn and Jason Eisner. Empirical Methods in Natural Language Processing (EMNLP), 2019

Simple Construction of Mixed-Language Texts for Vocabulary Learning
Adithya Renduchintala, Philipp Koehn and Jason Eisner. Association for Computational Linguistics (ACL) Workshop on Innovative Use of NLP for Building Educational Applications (BEA), 2019.

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

A Call for prudent choice of Subword Merge Operations.
Shuoyang Ding, **Adithya Renduchintala**, and Kevin Duh. Machine Translation Summit 2019.

Character-Aware Decoder for Translation into Morphologically Rich Languages.
Adithya Renduchintala, Pamela Shapiro, Kevin Duh and Philipp Koehn. Machine Translation Summit 2019.

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 Soplin, Jahn Heymann, Matthew Wiesner, Nanxin Chen, **Adithya Renduchintala** and Tsubasa Ochiai. Interspeech 2018

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

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. Association for Computational Linguistics (ACL) 2016.

Creating interactive macaronic interfaces for language learning.
Adithya Renduchintala, Rebecca Knowles, Philipp Koehn, and Jason Eisner. 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.

[Creating Serendipitous Encounters in a Geographically Distributed Community.](#)
Adithya Renduchintala, Aisling Kelliher, and Hari Sundaram. HCM Workshop in Conjuction with ACM. 2006.

Teaching	[Intro. to Human Language Technology](#), Teaching Assistant Fall, 2019
	[Neural Machine Translation with MxNet](#), JSALT Summer 2018
	[Machine Translation](#), Teaching Assistant Spring 2016
	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: Fairseq, OpenNMT, ESPNet, Sockeye
Other Toolkits: Moses, OpenFst

Nationality Indian, Permanent US Resident

Updated 02/15/2021