

Weiqiu You

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Research Interests

Natural language processing, natural language generation, machine translation, low-resource languages

Education

M.S. in Computer Science, University of Massachusetts, Amherst GPA: 3.95/4.00 Sep. 2018 – May 2020

- Advisor: Prof. Mohit Iyyer
- Thesis: Learning Representations and Drawing Inferences Using Both Texts and Drawings in Comics

B.S. in Computer Science & Mathematics, Gordon College GPA: 3.87/4.00 Sep. 2014 – May 2018

- Advisor: Prof. Jonathan Senning, Prof. Russell Bjork
- Thesis: Predict Media Interestingness (*The only Honors Thesis in CS department in five years*)

Study Abroad: Aquincum Institute of Technology, Budapest, Hungary GPA: 4.00/4.00 Aug. – Dec. 2017

Publication

Hard-Coded Gaussian Attention for Neural Machine Translation *Under Review ACL 2020*
Weiqiu You*, Simeng Sun*, Mohit Iyyer * equal contribution

Research Experience

Research Assistant, University of Massachusetts, Amherst Advisor: Prof. Mohit Iyyer Jan. 2019 – Present

- **Transformer with Hard-Coded Attention**
 - Modified multi-headed attention to hard-coded Gaussian attention Aug. – Dec. 2019
 - Reduced memory and inference time speed without much BLEU drop
- **RNN Machine Translation Faster Decoder**
 - Generate a fixed span of words at a time to speed up decoder Jan. – Jun. 2019
 - Tried to add syntax to improve performance. Proved that it will slow down the model

Research Intern, NLP Center, Meituan-Dianping Inc., Beijing, China Advisor: Dr. Zhongyuan Wang Jun. – Aug. 2018

- **Key phrase extraction**
 - Literature review in short text summarization and key phrase extraction
 - Used rule-based methods, statistics based methods, and deep learning models (CSDDM) in Python to successfully extract key phrases for customer QA data

Selected Course Research Projects

Scientific Paper Task, Problem and Contribution Identification and Tracking Sep. – Dec. 2019

- Implemented candidates extraction by rules
- Fine-tuned SciBERT on sentences that contain datasets to identify candidates that are true datasets

Chinese to English Machine Translation Specialized in Game of Go and Cooking Recipe (Low-Resource Setting) Sep. – Dec. 2018

- LSTM machine translation with Data augmentation by concatenating specialized terms in the dictionary
- Improved BLEU metric for comparison in specialized fields

Professional Experience

Teaching Assistant, Math and Computer Science Department, Gordon College Jan. 2016 – May 2018

- Led lab sessions for Data Structures and Algorithms
- Held Q&A sessions for Calculus and SPSS in Biostatistics
- Graded for Calculus II and Differential Equations

Web Development Intern, Gordon College

- Developed a quizzer website (using Ruby on Rails) for professor of Biblical studies Jun. – Jul. 2016
- Frontend and backend development for Gordon College's student life website (using C# & ASP.NET). Jun. – Aug. 2017

Technical Skills

Programming Language Python, Java, C++, C#, JavaScript, Ruby, Prolog **Framework** PyTorch, ASP.NET, Ruby on Rails

Language Skills

Fluent: Chinese, English **Intermediate:** Japanese (N2) **Beginner:** Hungarian

Leadership Experiences

Founder and President, Gordon College Go Club Apr. 2016 – May 2018