Zeqiu (Ellen) **Wu**

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Education

University of Washington
PHD CANDIDATE, ELECTRICAL & COMPUTER ENGINEERING DEPARTMENT
- Advisors: Mari Ostendorf & Hannaneh Hajishirzi (NLP Research Group)

Seattle, WA
2018 - PRESENT

University of Illinois
M.S. IN COMPUTER SCIENCE
- Advisor: Jiawei Han (Data Mining Research Group)

Urbana, IL
2016 - 2018

University of Illinois
B.S. IN ELECTRICAL ENGINEERING, WITH MINORS IN COMPUTER SCIENCE, MATH AND BUSINESS

Urbana, IL
2010 - 2014

Honors & Awards

2021	**1st Prize of DialDoc Shared Task at ACL 2021**
2018	**University of Washington Top Scholar Recruitment Fellowship**
2017	**SIGIR Student Travel Grant**
2014	**Highest Honor Graduate**
2014	**James Scholar**
2010-2014	**Dean's list**
2014	**Brian & Sophie Leung Scholarship**
2013	**Professor N. Narayana Rao Scholarship**

Publications

DIALKI: Knowledge Identification in Conversational Systems through Dialogue-Document Contextualization

Z. Wu*, B. Lu*, H. Hajishirzi and M. Ostendorf. *EMNLP, 2021.*

A Multi-Passage Knowledge Selector for Information-Seeking Dialogues

Z. Wu*, B. Lu*, H. Hajishirzi and M. Ostendorf. (NON-ARCHIVAL SYSTEM DESCRIPTION) *DialDoc@ACL, 2021.*

Automatic Document Sketching: Unblocking Writer's Block

Z. Wu, M. Galley, C. Brockett, Y. Zhang, B. Dolan. *ACL Findings, 2021.*

Extracting Summary Knowledge Graphs from Long Documents

Z. Wu, R. K. Kedziorski, M. Ostendorf, H. Hajishirzi. *Preprint.*

A controllable model of grounded response generation

Z. Wu, M. Galley, C. Brockett, Y. Zhang, X. Gao, C. Quirk, R. K. Kedziorski, J. Gao, H. Hajishirzi, M. Ostendorf, B. Dolan. *AAAI, 2021.*

HiExpan: Task-Guided Taxonomy Construction by Hierarchical Tree Expansion

J. Shen, Z. Wu, D. Lei, C. Zhang, X. Ren, M. T. Vanni, B. M. Sadler and J. Han. *KDD, 2018.*

Indirect Supervision for Relation Extraction Using Question-Answer Pairs

Z. Wu, X. Ren, F. F. Xu, J. Li, J. Han. *WSDM, 2018.*

SetExpan: Corpus-Based Set Expansion via Context Feature Selection and Rank Ensemble

J. Shen*, Z. Wu*, D. Lei, J. Shang, X. Ren, J. Han. *ECML-PKDD, 2017.*

CoType: Joint Extraction of Typed Entities and Relations with Knowledge Bases

X. Ren, Z. Wu, W. He, M. Qu, C. R. Voss, H. Ji, T. F. Abdelzaher, J. Han. *WWW, 2017.*

Life-iNet: A Structured Network-Based Knowledge Exploration and Analytics System for Life Sciences

X. Ren, J. Shen, M. Qu, X. Wang, Z. Wu, Q. Zhu, M. Jiang, F. Tao, S. Sinha, D. Liem, P. Ping, R. Weinshilboum, J. Han. (SYSTEM DEMO) *ACL, 2017.*

Research Experience

UW NLP Research Group
Advisors: Mari Ostendorf & Hannaneh Hajishirzi

Seattle, WA
Fall 2018 – Present

- Built a multi-task model of **knowledge identification in document-grounded conversations** and achieved state-of-the-art results in two recent datasets.
- Proposed a new text-to-data task, **document summarization using structured relational graphs**, together with evaluation metrics for the task. Implemented and assessed strong baselines as well as a new approach based on graph learning.
- Proposed to apply dialogue state tracking techniques to do early **conversations summarization with structures**, which would be used for response generation in the target conversation.
- Built a **grounded response generation system** by leveraging question-answering techniques to identify salient information from grounding for response generation.

Google AI
Mentors: Gaurav Tomar, Yi Luan & Hannah Rashkin

Seattle, WA
Summer 2021

- Worked on **query rewriting for conversational retrieval** that rewrites the dialogue context in a information-seeking dialogue into a standalone question, and retrieves the most relevant passage from the text corpus with a fixed retrieval system.

Microsoft Research NLP Team
Mentors: Michel Galley & Bill Dolan

Redmond, WA
Summer 2019 & Summer 2020

- Proposed the task and evaluation metrics of **template generation** from previously written documents as the first step towards building interactive document writing systems, and built strong baselines with weak supervision.
- Built a **controllable and knowledge-grounded dialogue response generation model** and analyzed how adding control and grounding leads to better generated responses.

UIUC Data Mining Research Group
Advisor: Jiawei Han

Urbana, IL
Fall 2016 – Spring 2018

- Improved **distantly supervised information extraction** (detection/classification of entities and relation triples in unstructured text corpora), which replaces human annotation with linking to knowledge bases, by developing noise-robust systems that extract entities and relations.
- Designed and built systems that facilitate automatic **faceted taxonomy construction** from any given text corpus in scientific domains, with a small number of user-provided seed examples.

UIUC MRI Lab
Advisor: Zhi-Pei Liang

Urbana, IL
Spring 2012 - Summer 2012

- Applied signal processing techniques to optimize real-time cardiac image reconstruction and de-noise dynamic MRI.

Industry Experience

IXL Learning
Software Engineer, Product Team

San Mateo, CA
2015 - 2016

- Maintained and developed IXL web education application and data analysis reporting systems.

Goldman Sachs
Software Engineer, Fixed Income Products Team

New York, NY
Summer 2013 & 2014 - 2015

- Built a market data monitoring system to inform high frequency traders of data trustworthiness.
- Developed the scalable fixed-income trading applications for daily trading, clearing and reporting.

Altera Corporation
Software Engineer Intern, FPGA Compiler Team

San Jose, CA
Fall 2012

- Worked on FPGA synthesis optimization and language extraction.

Teaching Experience

EE 511 (Introduction to Statistical Learning), UW ECE Department
Teaching Assistant

Seattle, WA
Winter 2019

CS 412 (Introduction to Data Mining), UIUC CS Department
Teaching Assistant

Urbana, IL
Fall 2016 & Spring 2018

Talks

1st DialDoc Workshop at ACL 2021
July 2021

Microsoft Research AI Breakthroughs Workshop
Sep 2020

Services

Program Committee (Reviewer)   *EMNLP 2021, ACL 20201, AKBC 2020,*
                                                                                   AAAI 2020

Visitor Coordinator, UIUC Data Mining Research Group   *2017-2018*

Alumni Chair, UIUC Women in Electrical and Computer Engineering   *2011-2012*

Skills

Programming: Python, Java, Matlab, C

Language: English, Chinese, Wu