

# MAN LUO

+1 (480) 869-7882  $\diamond$  mluo26@asu.edu

## EDUCATION

---

**Ph.D. student, Computer Science (GPA:3.85/4.0)**

Arizona State University (ASU), Tempe, Arizona, USA

Advisor: Dr. Chitta Baral

*August 2018 - (Expected) May 2023*

**Bachelor of Science, Computer Science (GPA:85/100)**

Beijing Forestry University, Beijing, China

*September 2014 - July 2018*

## RESEARCH INTEREST

---

**Natural Language Processing**, with a special focus on open domain retrieval under multi-modal setting, and open-book question answering, with an interest in dialogue system.

## WORK EXPERIENCE

---

Research Intern at Salesforce.Inc

Research Assistant at ASU

*May 2021 - Aug 2021*

*Aug 2018 - Present*

## RESEARCH EXPERIENCE (SELECTED FROM RECENT)

---

**Understanding Extractive and Generative Readers in MRC**

*May 2021 - Sep 2021*

- Implement three models using Transformer-based extractive and generative readers to solve ReQA machine reading comprehensive (MRC) task.
- Conduct comprehensive experiments to compare extractive and generative readers and draw conclusions why extractive can be better than generative reader in certain scenarios, and vice versa.
- Design a joint model of extractive and generative reader which performs better than single model in in-domain testing.

**Improve Neural Retrieval in Biomedical Domain**

*Jan 2021 - Sep 2021*

- Propose a template-based question generation method to increase training data, which can automatically extract templates from target domain and generate questions conditioned on a template and a context.
- Develop two novel pre-training tasks that are closely aligned to the downstream task of information retrieval.
- Introduce a model to improve word matching capacity of neural retriever by encoding each context into multiple contextual vectors.

**Weakly-Supervised Visual-Retriever-Reader for Ok-VQA** [[Github](#)]

*May 2021 - Sep 2021*

- Automatically collect large knowledge corpus from Web-data for knowledge based visual question answering (Ok-VQA) challenge.
- Propose a Visual Retriever-Reader pipeline to approach Ok-VQA, where visual retriever aims to retrieve relevant knowledge by multi-modality query, and the visual reader seeks to predict answers based query, image and given knowledge.

## TEACHING/MENTORING

---

## Teaching Assistant

CSE259 Logic in Computer Science

*Dec 2020 - Dec 2021*

CSE579 Knowledge Representation and Reasoning

*Aug 2019 - Dec 2019*

## Master Thesis

Yankai Zeng (now a Ph.D student in The University of Texas at Dallas).

*Aug 2020 - June 2021*

## Course Project Mentor

CSE576 Natural Language Processing

Domain Oriented Question Generation, 26 students,

*Aug 2021 - Dec 2021*

Differential Diagnosis Dialogue Generation, 20 students,

*Aug 2021 - Dec 2021*

Semantic Information Availability (SIA) Task, 5 students,

*Jun 2020 - May 2020*

Question Answering with Varied Types of Reasoning, 5 students.

*Jun 2020 - May 2020*

## INVITED TALK

---

“Semantic Searching in Biomedical Domain” at exploreCSR workshop (ASU).

*Mar 2021*

## AWARD

---

Finalist of 2021 Knowledge Mobilization Awards. [Website](#)

*April 2021*

2019 ICLP conference Doctoral Consortium Travel Award. [Website](#)

*September 2019*

Honorable Mention in Interdisciplinary Contest in Modeling(ICM)

*April 2017*

## PUBLICATION

---

- **Luo, M.**, Zeng, Y., Banerjee, P., Baral, C. [Weakly-Supervised Visual-Retriever-Reader for Knowledge-based Question Answering](#). EMNLP 2021.
- **Luo, M.** Sampat, S. Tallam, R. Zeng, Y. Vancha, M. Sajja, A. Baral, C. [Just because you are right, doesnt mean I am wrong: Overcoming a bottleneck in development and evaluation of Open-Ended VQA tasks](#). EACL 2021.
- Lee, J. and **Luo, M.**, 2019. [Strong equivalence for LPMLN programs](#). ICLP 2019.

## PRE-PRINT

---

- **Luo, M.**, Chen, S., Baral, C. (2021). [A Simple Approach to Jointly Rank Passages and Select Relevant Sentences in the OBQA Context](#). arXiv preprint arXiv:2109.10497
- Banerjee, P., Baral, C., **Luo, M.**, Mitra, A., Pal, K., Son, T. C., Varshney, N. (2020). [Can Transformers Reason About Effects of Actions?](#) arXiv preprint arXiv:2012.09938.