

SHUAICHEN CHANG

Amazon Web Services AI Lab
cshuaich@amazon.com <https://shuaichenchang.github.io/>

EMPLOYMENT

Amazon Web Services AI Lab Aug 2023 - Present
Applied Scientist II

EDUCATION

The Ohio State University Aug 2017 - Aug 2023
Ph.D. in Computer Science and Engineering

Fudan University Sep 2013 - Jun 2017
Bachelor in Computer Science and Technology, Outstanding Student Honor Program

RESEARCH EXPERIENCE

Research Assistant, The Ohio State University Aug 2017 - Aug 2023
Advisor: Eric Fosler-Lussier

Worked on robust and generalizable natural language interfaces to structured data (tables, databases, maps).

Applied Scientist Intern, Amazon AWS AI May 2022 - Aug 2022
Mentor: Jun Wang, Patrick Ng, Zhiguo Wang

Designed and curated a diagnostic evaluation benchmark toward Text-to-SQL robustness.

Applied Scientist Intern, Amazon Alexa AI May 2021 - Aug 2021
Mentor: Vaibhav Kumar, Sunghyun Park, Sungjin Lee

Worked on heterogeneous feature representation pre-training in large-scale conversational AI system.

Research and Development Intern, Pinterest May 2020 - Aug 2020
Mentor: Supeng Ge, Mao Ye

Developed a unified ads retrieval model on different surfaces, outperformed the production model up to 15% on revenue and 10% on user engagement.

Research Intern, JD.com AI research May 2018 - Aug 2018
Mentor: Jing Huang, Xiaodong He

Worked on converting natural language question to structured query (SQL) for unseen Database tables.

TEACHING EXPERIENCE

Instructor, Introduction to Artificial Intelligence at The Ohio State University Fall 2022
Teaching Assistant, Modeling and Problem Solving with Spreadsheets and Databases at The Ohio State University 2017-2022

PUBLICATIONS

RAGChecker: A Fine-grained Framework for Diagnosing Retrieval-Augmented Generation NeurIPS, 2023

Dongyu Ru, Lin Qiu*, Xiangkun Hu*, Tianhang Zhang*, Peng Shi*, Shuaichen Chang*, Cheng Jiayang, Cunxiang Wang, Shichao Sun, Huanyu Li, Zizhao Zhang, Binjie Wang, Jiarong Jiang, Tong He, Zhiguo Wang, Pengfei Liu, Yue Zhang, Zheng Zhang (* shared first author)*

PRACTIQ: A Practical Conversational text-to-SQL dataset with Ambiguous and Unanswerable Queries Preprint, 2024

Mingwen Dong, Nischal Ashok Kumar, Yiqun Hu, Anuj Chauhan, Chung-Wei Hang, Shuaichen Chang, Lin Pan, Wuwei Lan, Henghui Zhu, Jiarong Jiang, Patrick Ng, Zhiguo Wang

You Only Read Once (YORO): Learning to Internalize Database Knowledge for Text-to-SQL Preprint, 2024

Hideo Kobayashi, Wuwei Lan, Peng Shi, Shuaichen Chang, Jiang Guo, Henghui Zhu, Zhiguo Wang, Patrick Ng

Selective Demonstrations for Cross-domain Text-to-SQL

EMNLP Findings, 2023

Shuaichen Chang, Eric Fosler-Lussier

How to Prompt LLMs for Text-to-SQL: A Study in Zero-shot, Single-domain, and Cross-domain Settings NeurIPS TRL workshop, 2023

Shuaichen Chang, Eric Fosler-Lussier

Dr.Spider: A Diagnostic Evaluation Benchmark towards Text-to-SQL Robustness ICLR 2023

Shuaichen Chang, Jun Wang, Mingwen Dong, Lin Pan, Henghui Zhu, Alexander Hanbo Li, Wuwei Lan, Sheng Zhang, Jiarong Jiang, Joseph Lilien, Steve Ash, William Yang Wang, Zhiguo Wang, Vittorio Castelli, Patrick Ng, Bing Xiang
Notable Top 5%

MapQA: A Dataset for Question Answering on Choropleth Maps

NeurIPS TRL workshop, 2022

Shuaichen Chang*, David Palzer*, Jialin Li, Eric Fosler-Lussier, Ningchuan Xiao (* denotes equal contribution)

ExplainaBoard: An Explainable Leaderboard for NLP

ACL , 2021

Pengfei Liu, Jinlan Fu, Yang Xiao, Weizhe Yuan, Shuaichen Chang, Junqi Dai, Yixin Liu, Zihuiwen Ye, Graham Neubig
Best Demo Paper

Prefix-to-SQL: Text-to-SQL Generation from Incomplete User Questions ACL NLP4Prog workshop, 2021

Naihao Deng, Shuaichen Chang, Peng Shi, Tao Yu, Rui Zhang

Did You Ask a Good Question? A Cross-Domain Question Intention Classification Benchmark for Text-to-SQL EMNLP IntEx-SemPar workshop, 2020

Yusen Zhang, Xiangyu Dong, Shuaichen Chang, Tao Yu, Peng Shi, Rui Zhang

Zero-shot Text-to-SQL Learning with Auxiliary Task

AAAI, 2020

Shuaichen Chang, Pengfei Liu, Yun Tang, Jing Huang, Xiaodong He, Bowen Zhou

Contextualized Non-local Neural Networks for Sequence Learning

AAAI, 2019

Pengfei Liu, Shuaichen Chang, Xuanjing Huang, Jian Tang, Jackie Chi Kit Cheung

SELECTED AWARDS

| | |
|---|------|
| Post-internship Fellowship, Amazon | 2022 |
| Best Demo Paper, ACL | 2021 |
| Honors Student in Top Talent Undergraduate Training Program, Fudan University | 2017 |
| National Scholarship, Ministry of Education of P.R.China | 2016 |
| National Scholarship, Ministry of Education of P.R.China | 2015 |
| Silver Medal in the ACM-ICPC Asia Regional, ACM-ICPC | 2013 |

PROFESSIONAL SERVICE

Conference Reviewer: AAAI 2023, ACL 2023-2024, EMNLP 2021-2024, ICLM 2024, ICLR 2024-2025, LREC-COLING 2024, NeurIPS 2023-2024

PROFESSIONAL SKILLS

Programming Languages Libraries

Python, C/C++, Java, SQL
Pytorch, TensorFlow, Theano, OpenCV