

Nick McKenna

Curriculum Vitae

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Currently

Doctoral candidate in NLP finishing August 2023. Seeking a research position starting autumn 2023.
Experience: language inference, QA, Knowledge Graphs, LLMs, factuality/hallucination/generalization.

Education



The University of Edinburgh

Ph.D. Informatics

Expected Aug 2023

Thesis: Inference of Natural Language Predicates in the Open Domain

Advisor: Mark Steedman

M.Sc. Artificial Intelligence, *Distinction*

2019



Brown University

B.Sc. Computer Science

2017

Publications

Preprints

Nick McKenna* and Tianyi Li*; Liang Cheng, Mohammad Javad Hosseini, Mark Johnson, and Mark Steedman. *Sources of Hallucination by Large Language Models on Inference Tasks*. ArXiv, 2023.

↪ [Paper Link](#)

Nick McKenna and Mark Steedman. *Smoothing Entailment Graphs with Language Models*. ArXiv, 2022.

↪ [Paper Link](#)

Conference Papers

Nick McKenna, Liane Guillou, Mohammad Javad Hosseini, Sander Bijl de Vroe, Mark Johnson, and Mark Steedman. *Multivalent Entailment Graphs for Question Answering*. EMNLP, 2021.

↪ [Paper Link](#)

Nick McKenna and Mark Steedman. *Learning Negation Scope from Syntactic Structure*. *SEM, 2020.

↪ [Paper Link](#)

Workshop Papers

Nick McKenna and Priyanka Sen. *KGQA Without Retraining*. Simple and Efficient Natural Language Processing (SustaiNLP) at ACL, 2023.

↪ [Paper Link](#)

Sander Bijl de Vroe* and Liane Guillou*; Miloš Stanojević, **Nick McKenna**, and Mark Steedman. *Modality and Negation in Event Extraction*. Challenges and Applications of Automated Extraction of Socio-political Events from Text (CASE) at ACL, 2021.

↔ [Paper Link](#)

Professional Experience

Applied Scientist Intern, Amazon, Alexa AI Jun-Oct 2022
 Researched new methods in Knowledge Graph Question Answering. Developed a novel end-to-end QA model with a Differentiable Knowledge Graph which can answer using novel triples at test-time. Published in *ACL 2023: SustaiNLP workshop* as “KGQA Without Retraining”.

Product Manager, TapToBook 2017 – 2018
 Streamlined the core business model and focused on scalable AI solutions. Identified business needs, researched and designed features and services, and prioritized work for the development team.

Product Management Intern, Yelp Summer 2016
 Conducted experiments with the Machine Learning team, which grew engagement with extracted user review highlights by 13%. Performed extensive data analysis in SQL for product planning.

Engineering Intern, Yelp Summer 2015
 Developed a streamlined new tool to help restaurant hosts make new guest reservations (for *Yelp Reservations* on iPad). This tool reduced time spent on this task by 88%.

Scientific Service

Talk Panelist

“Getting into NLP Research” at NAACL 2021

Conference Referee

ACL	2023
EACL	2023
EMNLP	2021, 2023
COLING	2020
STARSEM	2020, 2021

Awards & Honors

Huawei Ph.D. Scholarship Award	2019
Outstanding M.Sc. Dissertation: “ Learning Negation Scope Semantics with Structure ”	2019

Teaching

Graduate TA at the University of Edinburgh

Accelerated Natural Language Processing (M.Sc. course)	2019 – 2021
Natural Language Understanding and Machine Translation (M.Sc. course)	2020 – 2022

Undergraduate TA at Brown University

Computational Linguistics	2017
Computer Graphics	2016
Computer Architecture	2015

Skills

- * Design of machine learning models for automatic language understanding.
- * PyTorch machine learning frameworks; Python, Java, C++, Swift/iOS.
- * Data analysis with SQL & Python numerical libraries numpy, pandas, scikit.

Extracurricular

Sponsorship Organizer, Hack@Brown 2015 – 2017
Raised \$45,000 for Brown's annual collegiate hackathon from partners Google, Microsoft, TwoSigma, and others.

Independent App Developer, Nighttime Software 2012 – 2016
Developed various apps and games for iOS. Notably, *2048: Two to Infinity* was downloaded over 16,000 times and ranked in the top 100 strategy games, USA and Canada.