

Nick McKenna

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Education



The University of Edinburgh

Ph.D. Informatics

Expected Aug 2023

Thesis: Open Domain Inference of Natural Language Predicates

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.
In Preparation

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 Knowledge	Jun-Oct 2022
Researched new methods in natural language inference and Knowledge Graph-based Question Answering. Developed a novel end-to-end QA model using a differentiable knowledge graph.	
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 <i>Yelp Reservations</i> on iPad). This tool reduced time spent on this task by 88%.	

Scientific Service

<i>Talk Panelist</i>	
“Getting into NLP Research” at NAACL	2021
<i>Conference Referee</i>	
ACL	2023
EACL	2023
EMNLP	2021
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

<i>Graduate TA at the University of Edinburgh</i>	
Accelerated Natural Language Processing [M.Sc. course]	2019 – 2021
Natural Language Understanding and Machine Translation [M.Sc. course]	2020 – 2022
<i>Undergraduate TA at Brown University</i>	
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.