

# Nikita Moghe

Natural Language Processing, Dialogue Systems

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## Education

### University of Edinburgh

2019 -

Ph.D., School of Informatics

Advisors: Alexandra Birch and Mark Steedman

### Indian Institute of Technology Madras

2016 - 2019

M.S. (by Research), Computer Science and Engineering

C.G.P.A: 8.8/10

Advisors: Balaraman Ravindran and Mitesh M. Khapra

Thesis: Incorporating External Knowledge in Domain Specific Conversation Systems

### University of Mumbai

2012 - 2016

B.E., Computer Engineering

C.G.P.A: 9.53/10

Sardar Patel Institute of Technology

## Publications

- **ACES: Translation Accuracy Challenge Sets for Evaluating Machine Translation Metrics** [pdf]  
Chantal Amrhein\*, Nikita Moghe\*, Liane Guillou\*  
To appear in Seventh Conference on Machine Translation (WMT 2022), EMNLP 2022.
- **Cross-lingual Intermediate Finetuning improves Dialogue State Tracking** [pdf] [poster]  
Nikita Moghe, Mark Steedman, Alexandra Birch  
In proceedings of 2021 Conference on Empirical Methods in Natural Language Processing, EMNLP 2021.
- **The University of Edinburgh-Uppsala University's Submission to the WMT 2020 Chat Translation Task** [pdf] [video]  
Nikita Moghe, Christian Hardmeier, Rachel Bawden  
In Proceedings of the Fifth Conference on Machine Translation (WMT 2020), EMNLP 2020.
- **On Incorporating Structural Information to improve Dialogue Response Generation** [pdf] [video]  
Nikita Moghe, Priyesh Vijayan, Balaraman Ravindran, Mitesh M. Khapra  
In Proceedings of the 2nd Workshop on Natural Language Processing for Conversational AI, ACL 2020.  
Extended abstract presented at EurNLP'19.
- **Towards Exploiting Background Knowledge for Building Conversation Systems** [pdf] [video]  
Nikita Moghe, Siddhartha Arora, Suman Banerjee, Mitesh M. Khapra  
In proceedings of 2018 Conference on Empirical Methods in Natural Language Processing, EMNLP 2018.
- **A Dataset for Building Code-Mixed Goal Oriented Conversation Systems** [pdf]  
Suman Banerjee, Nikita Moghe, Siddhartha Arora, Mitesh M. Khapra  
In proceedings of COLING 2018, International Committee on Computational Linguistics.

## Professional Experience

### PolyAI

June 2021 - September 2021

Machine Learning Intern

*Collaborators: Ben Levin, Ivan Vulić*

- Improved utterance representation by using conversational paraphrase detection as an intermediate task.
- Worked on synthetic data generation for few-shot intent detection.
- Conducted exploratory work on non-parametric few-shot multi-label intent detection.

### Microsoft Research India

June 2017

Participant, Workshop on Artificial Social Intelligence

*Team: Gurneet Singh, Sanchit Agrawal, Preksha Nema, Mitesh M. Khapra*

- Developed a minimalist conversation strategy to keep the user engaged for seven turns using insights from crowdsourced chats.
- Improved domain-specific conversations using information from knowledge graphs and case-based response generation.

## Achievements

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### Scholarships

- Nominated by the University of Edinburgh (one of three) for Google PhD Fellowship 2022.
- Nominated by the University of Edinburgh (one of three) for AIML Apple Scholars 2022.
- J.R.D. Tata Scholarship (Full Tuition Fee Waiver) 2013-14, 2014-15.
- Finalist for Narotam Seksaria Foundation's Engineering Excellence Scholarship 2015.

### Poster Presentations

- First Position at 4<sup>th</sup> RBC-DSAI Workshop May 2019. Awarded a travel grant of \$250.
- First Position at Grace Hopper Celebration India 2018 (GHCI '18).

### Travel Grants

- EurNLP 2019 Travel Grant for poster presenters.
- EMNLP 2018 Student Travel Scholarship.
- Microsoft Research India Student Travel Grant 2018.
- Grace Hopper Celebration India 2018 (GHCI '18) Student Scholarship.

### Awards

- Computer Society of India Highest Committed Student Award 2015.
- Infibeam's Most Innovative Project Idea 2015.

## Teaching

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### University of Edinburgh

- Marker, Demonstrator - Natural Language Understanding, Generation, and Machine Translation (Spring 2021, 2022)
- Demonstrator - Accelerated Natural Language Processing (Fall 2020)
- Marker - Doing Research in Natural Language Processing (2020)

### Indian Institute of Technology Madras

- Teaching Assistant - Introduction to Machine Learning (Fall 2017)

## Service

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### Organizer

- Workshop on Graphs and more Complex structures for Learning and Reasoning (GCLR) at AAAI-21.  
Moderated the panel on *Learning and Reasoning with Complex graphs - a multi-disciplinary challenge*.
- CDTalks (2021-2022) - a monthly seminar series.

### Reviewer

- AAAI (2020,2021), ACL (2020, 2021), ACL Rolling Review (2021-), COLING (2020, 2022), NAACL (2021)
- Workshops: NILLI(2021, 2022), CtrlGEN(2021), NLP4ConvAI(2022)

### Public Engagement

- I'm a Scientist Stay at Home - Mentor for Coding Zone, Summer 2020.
- International Women's Day Celebration 2020 - Edinburgh Hoppers.

### Mentoring

- Widening NLP, EMNLP 2021 - Graduate School
- Women in STEM Mentorship, Informatics, 2021-2022

## Talks

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- Intermediate Fine-tuning improves NLU for dialogue tasks - Alan Turing Institute, 13/05/2022
- Intermediate Fine-tuning improves NLU for dialogue tasks - Huawei (Invited), 07/02/2022
- The Great Intent Detective - Aveni (Invited), 02/11/2021
- The Great Intent Detective - PolyAI, 20/08/2021
- Multilingual Dialogue Systems - CDT Industry Day, 05/02/2021
- HollyChat! Domain Specific Conversational Agents - Microsoft Research India, 29/06/2017