

OSHIN AGARWAL

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EDUCATION

University of Pennsylvania, Philadelphia, PA, USA

Ph.D. Computer and Information Science (Natural Language Processing)

Aug 2018 – Present

Advisor: Ani Nenkova

Thesis Title: Context Reliability and Temporal Adaptation for Named Entity Recognition

M.S.E. Computer and Information Science. GPA: 3.84/4.0

Aug 2016 – May 2018

Birla Institute of Technology and Science - Pilani, Goa, India

B.E. (Hons), Computer Science Engineering, GPA: 9.55/10.0

Aug 2010 – May 2014

RESEARCH AND INDUSTRY EXPERIENCE

Research Scientist Intern

April 2022 – Present

Adobe Research, College Park, MD, USA (remote)

Mentor: Ani Nenkova

Incorporating external knowledge for Named Entity Recognition

Research Intern/Student Researcher

June 2021 – Nov 2021

Google Research, Mountain View, CA, USA (remote)

Mentors: Gustavo Hernandez Abrego, Mandy Guo, Jianmo Ni, Yinfei Yang

Incorporating long-form text to leverage multiple retrieved passages in open domain question answering

Research Intern/Student Researcher

May 2020 – Sept 2020

Google Research, Mountain View, CA, USA (remote)

Mentors: Heming Ge, Rami Al-Rfou, Siamak Shakeri

Knowledge Graph verbalization to integrate knowledge graphs in language model pre-training

Research Intern/Student Researcher

May 2019 – Dec 2019

Google Research, New York City, NY, USA

Mentor: Dan Bikel

Entity linking via dual and cross-attention encoders

Software Engineer

July 2014 – July 2016

Paypal, Chennai, India

Worked on the platform for batch processing of credit transactions to facilitate money movement. Developed features for existing vendors, enabled new vendors, and performed internal migration to improve run time

TEACHING EXPERIENCE

• Teaching Assistant, Senior Design (CIS 400), University of Pennsylvania

Fall 2019

• Teaching Assistant, Applied Machine Learning (CIS 519), University of Pennsylvania

Fall 2018

• Teaching Assistant, Software Systems (CIS 505), University of Pennsylvania

Fall 2017 & Spring 2018

PUBLICATIONS

Journal and Conference Papers

• Temporal Effects on Pre-trained Models for Language Processing Tasks

Oshin Agarwal and Ani Nenkova

TACL 2022, [Link](#)

• Knowledge Graph Based Synthetic Corpus Generation for Knowledge-Enhanced Language Model Pre-training

Oshin Agarwal, Heming Ge, Siamak Shakeri and Rami Al-Rfou

NAACL 2021, [Link](#)

• The Utility and Interplay of Gazetteers and Entity Segmentation for Named Entity Recognition in English

Oshin Agarwal and Ani Nenkova

Findings of ACL 2021, [Link](#)

- Interpretability Analysis for NER to Understand System Predictions and How They Can Improve
Oshin Agarwal, Yinfei Yang, Byron C. Wallace and Ani Nenkova
CL 2021, [Link](#)
- From Toxicity in Online Comments to Incivility in American News: Proceed with Caution
Anushree Hede, Oshin Agarwal, Linda Lu, Diana C. Mutz and Ani Nenkova
EACL 2021, [Link](#)
- Predicting Annotation Difficulty to Improve Task Routing and Model Performance for Biomedical IE
Yinfei Yang, Oshin Agarwal, Chris Tar, Byron C. Wallace and Ani Nenkova
NAACL 2019, [Link](#)

Workshop Papers

- Towards Robust NER via Temporal Domain Adaptation and Entity Context Understanding
Oshin Agarwal
AAAI Doctoral Consortium 2022, [Link](#)
- Machine Translation Aided Bilingual Data-to-Text Generation and Semantic Parsing
Oshin Agarwal, Mihir Kale, Heming Ge, Siamak Shakeri and Rami Al-Rfou
WebNLG+ 2020, [Link](#)
- Word Embeddings (Also) Encode Human Personality Stereotype
Oshin Agarwal, Funda Durupinar, Norman I. Badler and Ani Nenkova
*SEM 2019, [Link](#)
- Evaluation of Named Entity Coreference
Oshin Agarwal*, Sanjay Subramanian*, Ani Nenkova and Dan Roth
CRAC 2019, [Link](#)
- Browsing Health: Information Extraction to Support New Interfaces for Accessing Medical Evidence
Soham Parikh, Elizabeth Conrad, Oshin Agarwal, Iain Marshall, Byron Wallace and Ani Nenkova
ESSP 2019, [Link](#)

Preprints and Technical Reports

- Entity-Switched Datasets: An Approach to Auditing the In-Domain Robustness of NER Models
Oshin Agarwal, Yinfei Yang, Byron C. Wallace and Ani Nenkova, [Link](#)
- Entity Linking via Dual and Cross-Attention Encoders
Oshin Agarwal and Dan Bikel, [Link](#)

AWARDS

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- Haidas & Chryssikou Fellow for excellent progress in the PhD program, University of Pennsylvania *2020*
 - Third place poster award at the NDS symposium of New York Academy of Sciences for work on In-domain Robustness of Named Entity Recognition *2019*
 - Merit scholarship for being in top 1% of the class, BITS-Pilani Goa Campus *2010 – 2014*

SERVICE

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- Reviewer - ACL (2020), AAAI (2020), AACL (2020), EMNLP (2019), NAACL (2021), ACL SRW (2020, 2021), EACL SRW (2021)
 - Board member, CIS Doctoral Student Association, University of Pennsylvania *Fall 2018 – Present*
 - Co-chair & Treasurer, CIS Doctoral Student Association, University of Pennsylvania *Fall 2021 – Spring 2022*