Alok **Debnath**

PHD CANDIDATE · HUMAN COMPUTER INTERACTION + COMPUTATIONAL LINGUISTICS

Trinity College Dublin, Dublin 2, Ireland

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"Towards the confluence of language and computation"

Education

Ph.D. in Computer Science
Dublin, Ireland

TRINITY COLLEGE DUBLIN
Sep 2021 - Present

- Supervisor: Prof. Owen Conlan, at ADAPT Research Center
- Exploring how conversational agents capture and display empathy

MS by Research in Computational Linguistics
Hyderabad, India

INTERNATIONAL INSTITUTE OF INFORMATION TECHNOLOGY, HYDERABAD
Aug 2020 - Jul 2021

- Supervisor: Dr. Manish Shrivastava, at the Language Technologies Research Centre (LTRC)
- Published Masters Thesis: A Pregroup Representation and Analysis of Hindi Syntax
- Developed on a computational algebraic representation of Hindi syntax using a variation of Lambek calculus.

B.Tech. in Computer Science
Hyderabad, India

INTERNATIONAL INSTITUTE OF INFORMATION TECHNOLOGY, HYDERABAD
Aug 2016 - Jul 2020

- CGPA: 7.74
- Dean's List Awardee for Excellence in Academics (Spring 2020)
- Dean's List Awardee for Excellence in Research (2019, 2020)

Academic Experience

Demonstrator
Dublin

TRINITY COLLEGE DUBLIN
Sep 2021 -

- Evaluating assignments and examination submissions, conducting lab sessions
- **Subjects**: Introduction to Computer Science, Information Management, Symbolic Programming, Engineering Design, Software Engineering

Research Assistant
Hyderabad

INTERNATIONAL INSTITUTE OF INFORMATION TECHNOLOGY, HYDERABAD
Aug 2020 - Dec 2020

- Under the Supervision of Dr. Manish Shrivastava
- Assisting student researchers in topics such as distributional semantics, code-mixing and discourse semantics in Hindi
- Provided oversight to postgraduate researchers across multiple research projects

Visiting Research Intern
Stuttgart

INSTITUTE FOR NATURAL LANGUAGE PROCESSING, UNIVERSITY OF STUTTGART
May 2020 - Sep 2020

- Under the Supervision of Dr. Michael Roth
- Developed a computational representation of ambiguity and misunderstanding in instructional texts using language representations
- Established a basis for extracting ambiguous instructions from a corpus of revisions

Teaching Assistant
Hyderabad

INTERNATIONAL INSTITUTE OF INFORMATION TECHNOLOGY, HYDERABAD
Jan 2019 - May 2019, Aug 2019 - May 2020

- Prepared assignments, projects and answer keys, evaluated assignment submissions, and taught tutorials
- **Subjects**: Computational Linguistics, Natural Language Processing

Work Experience

NLP/ML Engineer
London

CISION (PREVIOUSLY FACTMATA)
Apr 2021 - Sep 2021

- Improved the efficiency and accuracy of stance detection model.
- Migrated and optimized existing language processing pipelines to use LLMs for a variety of classification and regression tasks,
- Developed a framework to perform NLP-based brand-safety assessment using cutting-edge volatility indicators.

Computational Linguistics Consultant

Bengaluru

NAVANA TECH

Feb 2020 - May 2020

- Helped in the development of an intent classifier for mobile banking applications in resource-starved conditions
- Documented the pipeline for creating language-agnostic ASR system

Language Engineer Intern

Bengaluru

NAVANA TECH

Jun 2019 - Aug 2019

- Developed a system for speech recognition of more than ten low-resource Indian languages and dialects
- Laid the foundations for an end-to-end neural chatbot in Indian languages

Publications

An Analysis of EmpatheticDialogues as a Corpus for Empathetic Engagement

Mar 2023

Alok Debnath AND OWEN CONLAN

CHI 2023

The Second EmpathiCH Workshop at 2023

Designing an Affective Interface for a Personal Digital Assistant

Oct 2022

Alok Debnath AND OWEN CONLAN

ACII 2022

10th International Conference on Affective Computing & Intelligent Interaction: Doctoral Consortium

Enhancing Aspect Extraction for Hindi

Apr 2021

ARGHYA BHATTACHARYA, *Alok Debnath* AND MANISH SHRIVASTAVA

ACL-IJCNLP 2021

The 4th Workshop on e-Commerce and NLP

A Computational Algebraic Analysis of Hindi Syntax

Apr 2021

Alok Debnath AND MANISH SHRIVASTAVA

Accepted with Minor Revisions

To appear in Journal of Logic, Language, and Information, Springer

A Computational Analysis of Vagueness in Revisions of Instructional Texts

Jan 2021

Alok Debnath AND MICHAEL ROTH

EACL 2021

16th Conference of the European Chapter of the Association for Computational Linguistics: Student Research Workshop

A Categorial Grammar Perspective of Universal Dependencies

Oct 2020

Alok Debnath AND MANISH SHRIVASTAVA

The 56th Linguistics Colloquium

To appear in Linguistik International, Peter Lang 2021

Word Embeddings as a Tuple of Feature Probabilities

May 2020

SIDDHARTH BHAT, *Alok Debnath*, SOUVIK BANNERJEE, AND MANISH SHRIVASTAVA

ACL 2020

5th Workshop on Representation Learning for NLP

Detection and Annotation of Events in Kannada

Mar 2020

SUHAN PRABHU, UJWAL NARAYAN, *Alok Debnath*, SUMUKH S, AND MANISH SHRIVASTAVA

LREC 2020

The Sixteenth Joint ACL-ISO Workshop on Interoperable Semantic Annotation

Hindi TimeBank: An ISO-TimeML Annotated Reference Corpus

Mar 2020

PRANAV GOEL, SUHAN PRABHU, *Alok Debnath*, PRIYANK MODI, AND MANISH SHRIVASTAVA

LREC 2020

The Sixteenth Joint ACL-ISO Workshop on Interoperable Semantic Annotation

Semantic Textual Similarity for Sentences with Emojis

Feb 2020

Alok Debnath, NIKHIL PINNAPARAJU, MANISH SHRIVASTAVA, VASUDEVA VERMA, AND ISABELLE AUGENSTEIN

The Web Conference 2020

The 8th International Workshop on Natural Language Processing for Social Media

Event Centric Entity Linking for Hindi News Articles: A Knowledge Graph Based Approach

Oct 2019

PRANAV GOEL, SUHAN PRABHU, *Alok Debnath*, AND MANISH SHRIVASTAVA

Main Conference

The Sixteenth International Conference on Natural Language Processing (ICON) 2019

Incorporating Sub-Word Level Information in Language Invariant Neural Event Detection

Oct 2019

SUHAN PRABHU, PRANAV GOEL, *Alok Debnath*, AND MANISH SHRIVASTAVA

Main Conference

The Sixteenth International Conference on Natural Language Processing (ICON) 2019

SmokEng: Towards Fine-grained Classification of Tobacco-related Social Media Text

Sep 2019

KARTIKEY PANT, VENKATA HIMAKAR YANAMANDRA, *Alok Debnath*, AND RADHIKA MAMIDI

EMNLP 2019

The 5th Workshop on Noisy User-generated Text (W-NUT)

A Pregroup Representation of Word Order Alternation using Hindi Syntax *Jun 2019*

Alok Debnath AND MANISH SHRIVASTAVA *NAACL 2019*

2019 Conference of the North American Chapter of the Association for Computational Linguistics: Student Research Workshop

A Semantico-Syntactic Approach to Event-Mention Detection and Extraction In Hindi *May 2019*

JAIPAL SINGH GOUD, PRANAV GOEL, *Alok Debnath*, SUHAN PRABHU AND MANISH SHRIVASTAVA *IWCS 2019*

The Fifteenth Joint ACL-ISO Workshop on Interoperable Semantic Annotation 2019

Program Committees

Chair	**Workshop on Context Representation in User Modeling**, UMAP (2023)
Reviewer	**Semantics: Sentence Level and Other Areas**, EACL (2023), NAACL(2022), EMNLP (2021)
Reviewer	**Resources and Evaluation Track**, ACL (2023), EMNLP (2022), EMNLP (2021)
Reviewer	**Student Research Workshop**, ACL (2022), ACL-IJCNLP (2021), NAACL (2021), ACL (2020)
Reviewer	**Demonstration Track**, ACL (2023), EACL (2023), ACL (2022), ACL (2020)
Reviewer	**Multiple Tracks**, ACL Rolling Review