Debjit Paul

Postdoctoral Researcher EPFL

CH-1015 Lausanne, Switzerland debjitpaulms@gmail.com https://debjitpaul.github.io/ Google Scholar Profile

AREAS OF INTEREST

Natural Language Understanding, Commonsense Reasoning, Knowledge-based Reasoning, Reinforcement Learning, Generative AI, Interpretable and Explainable AI, Human-AI Interaction

EDUCATION

Ph.D. in Computational Linguistics

2018 - 2022

Heidelberg University

Thesis: "Social Commonsense Reasoning with Structured Knowledge in Text"

Advisor: Prof. Anette Frank Grade: Summa cum laude

M.Sc. in Computer Science

2014 - 2017

Saarland University

Thesis: "Multitasking Learning With Unreliable Labels"

Advisor: Prof. Dietrich Klakow

B.Tech in Computer Science

2010 - 2014

GuruNanak Institute of Technology

Thesis: "Improved Algorithm for Human and non-Human Object Detection"

WORK EXPERIENCE Postdoctoral Researcher

April 2022 - Present

CE School of Computer and Communication Sciences at EPFL

Host: Prof. Boi Faltings, Prof. Robert West

Topic: Neuro-Symbolic AI

Funding: EU-Funded Horizon 2020 project

Research Intern

Winter 2021

Amazon Alexa AI Team, Berlin *Topic:* Continual Learning for NLP

PUBLICATIONS

Preprints Flows: Building Blocks of Reasoning and Collaborating AI arXiv 2023.

Martin Josifoski, Lars Klein, Maxime Peyrard, Yifei Li, Saibo Geng, Julian Paul

Schnitzler, Yuxing Yao, Jiheng Wei, **Debjit Paul**, Robert West

REFINER: Reasoning Feedback on Intermediate Representations arXiv 2023. **Debjit Paul**, Mete Ismayilzada, Maxime Peyrard, Beatriz Borges, Antoine Bosselut,

Robert West, Boi Faltings

Conferences CRoW: Benchmarking Commonsense Reasoning in Real-World Tasks

Association for Computational Linguistics: EMNLP 2023

Mete Ismayilzada, Debjit Paul, Syrielle Montariol, Mor Geva, Antoine Bosselut

CRAB: Assessing the Strength of Causal Relationships Between Real-world Events Association for Computational Linguistics: EMNLP 2023

Angelika Romanou, Syrielle Montariol, **Debjit Paul**, Leo Laugier, Karl Aberer, Antoine Bosselut

Language Model Decoding as Likelihood-Utility Alignment

Findings of the Association for Computational Linguistics: EACL 2023

Martin Josifoski, Maxime Peyrard, Frano Rajič, Jiheng Wei, **Debjit Paul**, Valentin Hartmann, Barun Patra, Vishrav Chaudhary, Emre Kiciman, Boi Faltings and Robert West

COINS: Dynamically Generating \underline{CO} ntextualized \underline{I} nference Rules for \underline{N} arrative \underline{S} tory Completion

Association for Computational Linguistics (ACL 2021)

Debjit Paul, Anette Frank

Generating Hypothetical Events for Abductive Inference

Proceedings of the Tenth Joint Conference on Lexical and Computational Semantics (*Sem 2021)

Debjit Paul, Anette Frank

 $CO\text{-}NNECT: A \ Framework \ for \ Revealing \ Commonsense \ Knowledge \ Paths \ as \ Explicitations \ of \ Implicit \ Knowledge \ in \ Texts$

Proceedings of the 14th International Conference on Computational Semantics Maria Becker, Katharina Korfhage, **Debjit Paul**, Anette Frank

Social Commonsense Reasoning with Multi-Head Knowledge Attention Findings of the Association for Computational Linguistics: EMNLP 2020 **Debjit Paul**, Anette Frank

Argumentative Relation Classification with Background Knowledge Proceedings of the 8^{th} International Conference on Computational Models of Argument (COMMA 2020), Frontiers in Artificial Intelligence and Applications, Computational Models of Argument.

Debjit Paul, Maria Becker, Juri Opitz, Graeme Hrist and Anette Frank

Explaining Arguments with Background Knowledge

Datenbank-Spektrum 20, 131–141 (2020)

Maria Becker, Ioana Hulpuş, Juri Opitz, **Debjit Paul**, Jonathan Kobbe, Heiner Stuckenschmidt, Anette Frank

Ranking and Selecting Multi-Hop Knowledge Paths to Better Predict Human Needs North American Chapter of the Association for Computational Linguistics (NAACL 2019)

Debjit Paul, Anette Frank

SERVICE Area Chair: EMNLP 2023

Program Committee: TACL 2023-2025, ACL 2023 & 2022, NAACL 2021, EMNLP 2022, 2021 & 2020, EACL 2023 & 2021, ARR, *SEM 2020 & 2021, CoNLL 2021, KI 2019, COIN 2019

HONORS AND Nominated as Best Student paper at COMMA 2020 **AWARDS**

Facebook Travel Award for EurNLP 2019, London, UK Winner of HQ Hackathon 2017, at Trivago, Dusseldorf, Germany

MENTORING PhD Researchers

Angelika Romanou co-advised with Antoine Bosselut Sept 2022 - June 2023 Shaobo Cui co-advised with Boi Faltings Sept 2022 - June 2023

MS Researchers

Mete Ismayilzada, Topic: Commonsense Reasoning
Rochat Mathieu Louis, Topic: Graph Continual Learning
Gabriele D'Angeli, Topic: Reinforcement Learning for NLP

Sept 2022 - June 2023
Sept 2022 - April 2023
August 2023 - Present
August 2023 - Present

EPFL Summer Intern

Omar El Malki, Topic: Reinforcement Learning for NLP
Luca Mouchel, Topic: Logical Fallacy

June 2022 - Feb 2023
August 2023 - Present

TECHNOLOGY

Programming Languages: Python, Java, C.

SKILLS Machine learning and NLP tools: PyTorch, Tensorflow, JAX, spaCy, AllenNLP,

Transformers library.

LANGUAGES Bengali: Native language

English: Full professional proficiency German: Elementary proficiency

REFERENCES Prof. Anette Frank Email: frank@cl.uni-heidelberg.de

Prof. Boi Faltings Email: boi.faltings@epfl.ch Prof. Robert West Email: robert.west@epfl.ch

 $Prof.\ Antoine\ Bosselut\ \ {\it Email:}\ antoine.bosselut@epfl.ch$