

Shramay Palta

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Summary

I am broadly interested in the areas of **Natural Language Processing (NLP)** and **Computational Linguistics**, with a focus on **Explainability**, **Commonsense Reasoning** and **Bias and Fairness in NLP**.

Education

University of Maryland, College Park

DOCTOR OF PHILOSOPHY, COMPUTER SCIENCE. **GPA: 3.90/4.00**

Advisor: **Professor Rachel Rudinger**

College Park, Maryland, USA

AUGUST 2021 - PRESENT

University of Maryland, College Park

MASTER OF SCIENCE, COMPUTER SCIENCE. **GPA: 3.90/4.00**

Advisor: **Professor Rachel Rudinger**

College Park, Maryland, USA

AUGUST 2021 - MAY 2023

Birla Institute of Technology and Science, Pilani (BITS Pilani)

BACHELOR OF ENGINEERING, ELECTRICAL AND ELECTRONICS ENGINEERING **FIRST DIVISION**

Thesis Supervisor: **Dr. Ashok Agrawala (UMD)** and **Dr. Navneet Gupta (BITS)**.

Pilani, India

AUGUST 2017 - MAY 2021

Research and Work Experience

Computational Linguistics and Information Processing (CLIP) Lab

GRADUATE STUDENT UNDER PROF. RACHEL RUDINGER

- Using **explainability** techniques to help identify and explain **ambiguous questions**.
- Investigating different forms of **biases** in **NLP models** and **datasets**.

College Park, Maryland, USA

NOVEMBER 2021 - PRESENT

Human-Data Interaction Group, University of Maryland

GRADUATE RESEARCH ASSISTANT UNDER PROF. LEO ZHICHENG LIU

- Using **Natural Language Processing** Techniques to harvest design feedback from visualization comments on social media platforms like Reddit.

College Park, Maryland, USA

SEPTEMBER 2021 - MARCH 2022

Maryland Information and Network Dynamics (MIND) Lab, University of Maryland

RESEARCH ASSISTANT UNDER PROF. ASHOK AGRAWALA (UNDERGRADUATE RESEARCH THESIS)

- Analyzing the spread of **COVID-19 and Flu virus** on campus using location and breathing data collected from **Spire Tags**. Part of the **PROMETHEUS** Project in collaboration with the School of Public Health.

College Park, Maryland, USA

MAY 2020 - FEBRUARY 2021

Global Health Centre, Graduate Institute of International and Development Studies

RESEARCH INTERN UNDER DR. AMANDEEP GILL, EXECUTIVE DIRECTOR, UNSG'S PANEL ON DIGITAL COOPERATION

- Researched the role of **micro-narratives** as proxy variables to fill in missing data, and to develop **human-centered benchmarks** for **digital health** and used **natural language techniques** to study the social, health, and mental impacts of the **COVID-19** pandemic.

Geneva, Switzerland

MAY 2020 - OCTOBER 2020

TurnoutNow LLC

DATA SCIENCE INTERN

- Using **real-time location data** from **IoT BLE Beacons** and **natural language generation** tools with live data connections to generate narratives for end users.

Lancaster, Pennsylvania, USA

MAY 2019-JULY 2019

Publications

FORK: A Bite-Sized Test Set for Probing Culinary Cultural Biases in Commonsense Reasoning Models – Findings of the 61st Conference of the Association for Computational Linguistics (ACL 2023)

SHRAMAY PALTA AND RACHEL RUDINGER

Investigating Information Inconsistency in Multilingual Open-Domain Question Answering – Arxiv preprint

SHRAMAY PALTA, HAOZHE AN, YIFAN YANG, SHUAIYI HUANG, MAHARSHI GOR

Activities

Reviewer: ACL 2023, EACL 2023, EMNLP 2022

Member: Graduate Admissions Committee, Graduate Student Committee (CS GradCo)

Projects

Rationalizing Ambiguous Commonsense Reasoning Answers

WORK WITH PROF. RACHEL RUDINGER

- Using **ambiguous questions** from datasets like SOCIAL-IQA and using different **explainability** methods to rationalize such questions.
- Presenting such questions and explanations to human annotators and determining the **plausibility** of such explanations.

College Park, Maryland

JANUARY 2023 - PRESENT

Culinary Cultural Biases in Commonsense Reasoning

College Park, Maryland

WORK WITH PROF. RACHEL RUDINGER

NOVEMBER 2021- JANUARY 2023

- Investigated modern-day **commonsense reasoning** NLP Models and datasets like **CommonsenseQA** to determine if they have an implicit or explicit **cultural bias** baked into them.
- Introduced a new dataset, **FORK**, consisting of questions that can be used to stress test models using examples of cultural and social norms, and material and physical differences revolving around different culinary cultural practices and related customs. (Accepted to **Findings of ACL 2023**)
- Demonstrated that models have systematic cultural biases aligned with US over non-US cultures.

Analyzing Inconsistencies in Multilingual Open-Domain QA

College Park, Maryland

WORK WITH PROF. JORDAN BOYD-GRABER

MARCH 2022- PRESENT

- Investigating whether **multilingual question answering** can potentially expose users to unreliable information through **cultural differences, divergent national laws, or uneven resources**.
- Analyzing if **different retriever models** present different passages—and answers—given the same question in different languages different multilingual QA datasets.
- Different answers potentially reveal valuable information about per-language **resources disparity, and linguistic variation**.

Skills

Languages	Python, R, SQL, Linux/Unix shell, Java, C++, C, Assembly Language.
Tools	Pandas, NumPy, NLTK, spacy, Transformers, Keras, TensorFlow, PyTorch, scikit-learn, Matplotlib, Jupyter, Git, \LaTeX , MATLAB, MySQL.
Key Courses	Explainable Natural language Processing, CommonSense Reasoning and Natural Language Understanding, Natural Language Processing, How and Why AI Answers Questions, Human AI Interaction, Advanced Numerical Optimization.
OS	MacOS, Linux, Windows, FreeBSD.

Achievements

2022	Dean's Fellowship Award: Awarded the Graduate School Dean's Fellowship Award for outstanding academic achievement.
2021	Dean's Fellowship and Chair's Fellowship Award: Awarded the Graduate School Dean's Fellowship and the Chair's Fellowship Award for outstanding academic achievement.
2010	World Robot Olympiad: Represented India at the World Robot Olympiad held in Manila, Philippines, and secured a world rank of 31 in my category.
2010	Indian Robot Olympiad: Awarded the 1st Runners Up Award in my category for the north chapter.