KANISHKA MISRA

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Academic Positions

2025–current	**The University of Texas at Austin** Assistant Professor of Linguistics Donald D. Harrington Faculty fellow (2025-26)
2024–2025	**Toyota Technological Institute at Chicago** Research Assistant Professor (*Endowed research faculty position for up to 3 years*) Courtesy Affiliation from 2025–current.
2023–2024	**The University of Texas at Austin** Postdoctoral Research Fellow, Department of Linguistics **Advisor:** Dr. Kyle Mahowald

Education

Purdue University, West Lafayette, USA
Ph.D. in Computer Information Technology, 2018–2023
Dissertation: *On Semantic Cognition, Inductive Generalization, and Language Models*
Advisor: Dr. Julia Taylor Rayz
Committee: Dr. Allyson Ettinger, Dr. Victor Raskin, Dr. Jin Wei Kocsis, Dr. John Springer

Purdue University, West Lafayette, USA
M.S. in Computer Information Technology, 2020 (work performed alongside PhD requirements)
Thesis: *Exploring Lexical Sensitivities in Word Prediction Models: A case study on BERT*
Advisor: Dr. Julia Taylor Rayz
Note: Work performed alongside requirements for Ph.D.

Purdue University, West Lafayette, USA
B.S. *with distinction*. Computer Information Technology, 2014–2018
Minor in Statistics

Industry Experience

Fall 2022	**Google Research -** *Research Intern* **Project:** Triggering Multi-Hop Reasoning in LLMs with Soft-prompts. **Host(s):** Siamak Shakeri and Cicero Nogueira dos Santos.
Summer 2021	**Pythonic AI -** *NLP Engineering/Research Intern* **Project:** Integrating Biomedical Commonsense into Language Models. **Host:** Baoqiang Cao, CTO and Co-founder.

Work In Progress and Preprints

2026   **Kanishka Misra**. Conceptual Knowledge in Language Models. *In Prep.* for submission to *Current Opinion in Behavioral Sciences*.

2026   Tianyang Xu, Marcelo Sandoval-Castaneda, Greg Shakhnarovich, Karen Livescu, **Kanishka Misra**. Cross-modal Taxonomic Generalization in (Vision) Language Models. *Under Review.*

2026   Sriram Padmanabhan, Siyuan Song, **Kanishka Misra**. Bears, all bears, and some bears. Language Constraints on Language Models' Inductive Inferences. *Under Review.*

2025   Lalchand Pandia, Allyson Ettinger, **Kanishka Misra**. On Diversity vs. Difficulty for Data Selection. *Under Review.*

2024   **Kanishka Misra**, Najoung Kim. Generating novel experimental hypotheses from language models: A case study on cross-dative generalization. *Preprint.*

2022   **Kanishka Misra**. minicons: Enabling Flexible Behavioral and Representational Analyses of Transformer Language Models. Software Paper. *Preprint/Demo.*

Peer-reviewed Publications

2026   Junyi Jessy Li, Yang Janet Liu, **Kanishka Misra**, Valentina Pyatkin, William Sheffield. Which course? Discourse! Teaching Discourse and Generation in the Era of LLMs. *To appear in the Proceedings of the Seventh Workshop on Teaching NLP.*

2026   Sanghee Kim, **Kanishka Misra**. Hey, wait a minute: On at-issue sensitivities in Language Models. *To appear in Proceedings of EACL 2026.*

2026   Daniel Brubaker, William Sheffield, Junyi Jessy Li, **Kanishka Misra**. WUGNECTIVES: Novel Entity Inferences of Language Models from Discourse Connectives. *To appear in Proceedings of EACL 2026.*

2025   Yulu Qin,* Dheeraj Varghese,* Adam Dahlgren Lindström, Lucia Donatelli, **Kanishka Misra**,[†] Najoung Kim.[†] Vision-and-Language Training Helps Deploy Taxonomic Knowledge but Does Not Fundamentally Alter It. *NeurIPS 2025.* *,[†]: Equal Contribution.

2025   Sriram Padmanabhan, **Kanishka Misra**, Kyle Mahowald, Eunsol Choi. On language models' sensitivity to suspicious coincidences. *PragLM Workshop at COLM 2025* (to appear).

2025   Qing Yao, **Kanishka Misra**, Leonie Weissweiler, Kyle Mahowald. Both Direct and Indirect Evidence Contribute to Dative Alternation Preferences in Language Models. *COLM 2025* (to appear).

2025   William Sheffield, **Kanishka Misra**, Valentina Pyatkin, Ashwini Deo, Kyle Mahowald, Jessy Li. Is It *JUST* Semantics? A Case Study of Discourse Particle Understanding in LLMs. *Findings of ACL 2025* (to appear).

2024   Juan Diego Rodriguez, Aaron Mueller, **Kanishka Misra**. Characterizing the Role of Similarity in the Property Inferences of Language Models. *NAACL 2025.*

2024   **Kanishka Misra**, Allyson Ettinger, and Kyle Mahowald. Experimental Contexts Can Facilitate Robust Semantic Property Inference in Language Models, but Inconsistently. *EMNLP 2024.*

2024 **Kanishka Misra** and Kyle Mahowald. Language Models Learn Rare Phenomena from Less Rare Phenomena: The Case of the Missing AANNs. *EMNLP 2024*. **Recipient of an Outstanding Paper Award (Top 0.4%)**.

2023 **Kanishka Misra**, Cicero Nogueira dos Santos, Siamak Shakeri. Triggering Multi-hop reasoning in language models using soft-prompts and random walks. *Findings of ACL 2023*

2023 Koustuv Sinha*, Jon Gauthier*, Aaron Mueller[†], **Kanishka Misra**[†], Keren Fuentes, Roger Levy, Adina Williams. Language model acceptability judgments are not always robust to context. *ACL 2023*. **Recipient of an Outstanding Paper Award (Top 1%)**.*,[†]: Equal Contribution

2023 Freda Shi*, Xinyun Chen*, **Kanishka Misra**, David Dohan, Ed Chi, Nathan Scharli, Denny Zhou. Large Language Models Can Be Easily Distracted by Irrelevant Context. *ICML 2023*. *: Equal Contribution

2023 **Kanishka Misra**, Julia Taylor Rayz, Allyson Ettinger. COMPS: Conceptual Minimal Pair Sentences for Testing Robust Property Knowledge and its Inheritance in Pre-trained Language Models. *EACL 2023*. **Recipient of the Best Paper Award (Top 0.1%)**.

2022 **Kanishka Misra**, Julia Taylor Rayz, Allyson Ettinger. A Property Induction Framework for Neural Language Models. *44th Annual Conference of the Cognitive Science Society*.

2022 **Kanishka Misra**, Julia Taylor Rayz. LMs Go Phishing: Adapting Pre-trained Language Models to Detect Phishing Emails. *IEEE/ACM Web Intelligence Conference*.

2022 **Kanishka Misra**. On Semantic Cognition, Inductive Generalization, and Language Models. *AAAI 2022 Doctoral Consortium*, Vancouver, Canada.

2021 **Kanishka Misra**, Allyson Ettinger, Julia Taylor Rayz. Do Language Models learn typicality judgments from text? *43rd Annual Conference of the Cognitive Science Society*.

2021 **Kanishka Misra**, Julia Taylor Rayz. Finding fuzziness in Neural Network models of Language Processing. *Annual Meeting of the North American Fuzzy Information Processing Society 2021*. **Honorable Mention for Best Student Paper**.

2020 **Kanishka Misra**, Allyson Ettinger, Julia Taylor Rayz. Exploring BERT's Sensitivity to Lexical Cues using Tests from Semantic Priming. *Findings of the Association for Computational Linguistics: EMNLP 2020*.

2020 Qingyuan Hu, Yi Zhang, **Kanishka Misra**, Julia Taylor Rayz. Exploring Lexical Irregularities in Hypothesis-Only Models of Natural Language Inference. *2020 IEEE 19th International Conference on Cognitive Informatics & Cognitive Computing (ICCI* CC)*.

2020 **Kanishka Misra**, Julia Taylor Rayz. An Approximate Perspective on Word Prediction in Context: Ontological Semantics meets BERT. *Annual meeting of the North American Fuzzy Information Processing Society 2020*. Online.

2019 **Kanishka Misra**, Hemanth Devarapalli, Tatiana Ringenberg, Julia Taylor Rayz. Authorship Analysis of Online Predatory Conversations using Character Level Convolution Neural Networks. *2019 IEEE International Conference on Systems, Man and Cybernetics (SMC)*, Bari, Italy.

2019 Tatiana Ringenberg, **Kanishka Misra**, Julia Taylor Rayz. Not So Cute but Fuzzy: Estimating Risk of Sexual Predation in Online Conversations. *2019 IEEE International Conference on Systems, Man and Cybernetics (SMC).*, Bari, Italy. **(joint first author)**

2019   Tatiana Ringenberg, **Kanishka Misra**, Kathryn C. Seigfried-Spellar, Julia Taylor Rayz. Exploring Automatic Identification of Fantasy-Driven and Contact-Driven Sexual Solicitors. *2019 Third IEEE International Conference on Robotic Computing (IRC).*, Naples, Italy.

2019   Kathryn C. Seigfried-Spellar, Marcus K Rogers, Julia T Rayz, Shih-Feng Yang, **Kanishka Misra**, Tatiana Ringenberg. Chat analysis triage tool: Differentiating contact-driven vs. fantasy-driven child sex offenders. *Forensic Science International, 2019.*

Peer-reviewed Abstracts

2025   Jwalanthi Ranganathan, Rohan Jha, **Kanishka Misra**, Kyle Mahowald. `semantic-features`: A User-Friendly Tool for Studying Contextual Word Embeddings in Interpretable Semantic Spaces. *SCiL 2025*. Oregon, USA.

2023   **Kanishka Misra** and Najoung Kim. Abstraction via exemplars? A representational case study on lexical category inference in BERT. *BUCLD 48*. [poster]

2020   **Kanishka Misra**, Allyson Ettinger, Julia Taylor Rayz. Exploring BERT's lexical relations using Semantic Priming. *CogSci 2020* [poster]

2019   **Kanishka Misra**, Hemanth Devarapalli, Julia Taylor Rayz. L1 Influence on Content Word errors in Learner English Corpora: Insights from Distributed Representation of Words. *CogSci 2019*, Montréal, Canada. [poster]

Presentations and Invited Talks

Spring 2026	*TBD* Keynote at the International Conference on Construction Grammar (June)
Spring 2026	*Hypothesis Generation as a Bridge between Human and Machine Cognitive Science* Keynote at the Texas Linguistics Society (Feb 20) Talk at the University of Amsterdam (April 2) Keynote at the Workshop on Computational Developmental Linguistics, ACL 2026 (July)
Fall 2025	*Whence insights? Delineating Human and Machine CogSci, and hypothesis generation as a possible bridge* UC San Diego Linguistics (joint talk with Najoung Kim)
Spring 2025	*Linguistic and Conceptual Generalization From Language Exposure* UW Madison, Department of Psychology (Colloquium) UT Austin, Department of Linguistics (Colloquium) Boston University, Department of Linguistics (Colloquium)
Spring 2025	*Similarity and Category Membership in the Property Inferences of LMs* Keynote at Structure & Generalization in Multimodal Language Understanding (SAGE-MLU) Workshop, VU Amsterdam

Spring 2025	*Minicons: A tool for behavioral analysis of neural language models* Online Colloquium Talk, Conference on Human Sentence Processing
Fall 2024	*Language Models Learn Rare Phenomena from Less Rare Phenomena: The Case of the Missing AANNs* EMNLP 2024, Main conference (November).
Fall 2024	*Generalization from Indirect Evidence in Language Models* Guest lecture for UChicago course: *Do LLMs Generalize?* (taught by Ari Holtzman) Research @ TTIC Series.
Summer 2024	*Controlled Rearing of Language Models can reveal Linguistic Insight* (Invited Talk) Princeton Psychology of Language Lab (Adele Goldberg's group)
Spring 2024	*Controlled Rearing of Language Models can reveal Linguistic Insight* SynSem Seminar, UT Austin Linguistics. South by Semantics Workshop, UT Austin (Invited Talk)
Spring 2024	*Large Language Models and You!* (Guest Lecture) Intro to Ling class (taught by Kristie Denlinger, UT Austin)
Fall 2023	*Analyzing Robust Conceptual Knowledge and Property Inheritance in Language Models* (Invited Talk) Guest lecture for *Topics in Natural Language Processing* (taught by Eunsol Choi) Toyota Technological Institute at Chicago - Research Series. C.Psyd Lab (Marten van Schijndel's lab), Cornell University.
Fall 2023	*Language model acceptability judgments are not always robust to context* UT Austin NLL Reading Group.
Spring 2023	*COMPS: Conceptual Minimal Pair Sentences for testing Robust Property Knowledge and its Inheritance in Pre-trained Language Models* EACL 2023, Main Conference
Spring 2023	*On the synthetic semantic cognition of language models* (Invited Talk) EvLab and LINGO lab. MIT. Toyota Technological Institute at Chicago.
Fall 2022	*Conceptual Minimal Pairs for testing Robust Property Knowledge and its Inheritance in Pre-trained Language Models* (Invited Talk) CompLing Lab, University of Chicago Human and Machine Learning Lab. New York University Computation and Psycholinguistics Lab. New York University CompLang/Ev Lab joint meeting. MIT Language Evolution, Acquisition and Processing Workshop. University of Chicago
Fall 2022	*Triggering Multi-Hop Reasoning in LLMs using Soft-Prompts* Prompt-tuning sync. Google Research.

Spring 2022	*On Semantic Cognition, Inductive Generalization, and Language Models* AAAI 2022 Doctoral Consortium. Vancouver (held online).
Fall 2021	*Finding fuzziness in Neural Network Models of Language Processing* NAFIPS 2021 (held online).
Summer 2021	*Do Language Models Learn Typicality Judgments from Text?* CogSci 2021 Main Conference (held online).

Honors and Awards

2025	**Donald D. Harrington Faculty Fellowship**. *Endowed Faculty Research Fellowship, UT-Austin*. **Amount:** $75,000 in research funds.
2024	**Outstanding Paper Award**. *EMNLP 2024*.
2024	**Google Cloud Credits**. **Co-PI along with Najoung Kim.** *Google*. **Amount:** $5000.
2023	**Paula Menyuk Travel Award**. *BUCLD 48*. **Amount:** $385.
2023	**Outstanding Paper Award**. *ACL 2023*.
2023	**Best Paper Award**. *EACL 2023*. **Amount:** $1000.
2023	**Bilsland Fellowship**. *Purdue University*. **Amount:** $25,000 + Tuition (1 year).
2022	**Best Student Poster (runner-up)** *PPI Holistic Safety and Security Research Impact area.* **Amount:** $250.
2022	**Fellow**, *Purdue Graduate Student Mentoring Fellows Program.* **Amount:** $5,000 in research funds.
2021	**Honorable Mention for Best Student Paper**, *North American Fuzzy Information Processing Society.* **Amount:** $100.
2019	**Holistic Safety and Security Research Travel Grant**, *Purdue Polytechnic Institute.* **Amount:** $500.
2019	**CIT Research Travel Grant Award**, *Purdue CIT.* **Amount:** $1200 (CogSci 2019), $600 (IEEE-SMC 2019).
2019	**Best HSS Poster Presentation**, *CERIAS Symposium.* Award presented by committee on Holistic Safety and Security (HSS) research impact area. [link].
2019	**Conference Travel Award**, *Chicago R Unconference.* **Amount:** $150.
2018	**PRF Fellowship**, *Purdue Research Foundation.* Covered two semesters worth of graduate school, in addition to stipend.
2018	**Best Poster Award - PPI**, *Purdue Office of Undergraduate Research Expo.* **Amount:** $250. [link]
2018	**Research Scholarship**, *Purdue Office of Undergraduate Research.* **Amount:** $500.
2017	**First Place**. *Indy Civic Hackathon.* **Amount:** $2000 split across 4 team members.

Teaching

Guest Lecturer - *Natural Language Technologies* **(CNIT 519)**
Timeline: Fall 2019, Fall 2020, Spring 2022
Course Professor: Dr. Julia Taylor Rayz
- Two lectures on Neural Network models of Natural Language Processing
- Developed two assignments on language model interpretability and evaluation.

Teaching Assistant - *Database Fundamentals* **(CNIT 272)**
Timeline: Fall 2019, Spring 2020, Fall 2020
Course Professor: Dr. Dawn D. Laux
Developed lecture videos and taught fundamentals of relational databases and SQL to three lab sections
($\approx$ 70 students on average across three semesters).
Instructor Rating: 4.8/5 (on average across three semesters)

Mentorship

PhD Dissertation Committee:

1. Qing Yao, UT Austin, Linguistics.

2. Yulu Qin, Boston University, Linguistics.

3. Lalchand Pandia, University of Chicago, Computer Science.

4. William Sheffield, UT Austin, Linguistics.

5. Wesley Scivetti, Georgetown University, Linguistics.

Project-based Mentorship:

2024–	**Yulu Qin** (PhD Student at BU, advised by Dr. Najoung Kim). **Topic(s):** *Role of Vision in Language Models' Linguistic Representations and Use.*
2024–	**Shester Guewou** (PhD Student at TTIC, advised by Dr. Greg Shakhnarovich and Karen Livescu). **Topic(s):** *Targeted Linguistic Analysis of Sign Language Models.*
2024–	**Tianyang Xu** (PhD Student at TTIC, advised by Dr. Karen Livescu). **Topic(s):** *Cross-modal Taxonomic Generalization in LMs.*
2024–	**Qing Yao** (PhD Student at UT Austin, advised by Dr. Kyle Mahowald). **Topic(s):** *Learning global psycholinguistic preferences.*
2024–	**Lalchand Pandia** (PhD Student at the University of Chicago). **Topic(s):** *Data Selection for Language Models.*
2023–	**William Sheffield** (PhD Student at UT Austin, advised by Dr. Jessy Li). **Topic(s):** *Discourse-sensitive properties of Language Models*
2023–25	**Juan Diego Rodriguez** (PhD Student at UT Austin, advised by Dr. Greg Durett and Dr. Katrin Erk). **Topic(s):** *Conceptual Organization and Inference in Language Models*

2023–	**Sriram Padmanabhan** (Undergraduate at UT Austin). **Topic(s):** *Language Models and Inductive Inferences*
2023–25	**Jwalanthi Ranganathan** (Undergraduate at UT Austin). **Topic:** *Projecting Contextualized Word Embeddings onto Interpretable Semantic Spaces.*
2023–25	**Daniel Brubaker** (Undergraduate at UT Austin). **Topic:** *Exploring pragmatic inference in LMs with Discourse Connectives.*
2020	**Qingyuan "Carol" Hu and Yi Zhang** (Undergraduates). **Topic:** *Exploring Lexical Irregularities in Hypothesis-only Models of Natural Language Inference.* **Outcome:** Publication in *IEEE ICCC* CI 2020*, and a presentation at *PURC 2020*, which was <u>awarded second place</u> across all students from the Purdue Polytechnic Institute.
2018–19	**John Phan** (Undergraduate). **Topic:** *Gender Bias in Word Embeddings.* Awarded NSF REU scholarship. **Outcome:** Two poster presentations.

Reviewing

Grants	US National Science Foundation - SBE directorate (2024); Panel Member for NSF CISE/IIS (2025); Israeli Ministry of Innovation, Science and Technology (2025); German Research Foundation (DFG)
Journal	*Open Mind* (2026); *Annals of the New York Academy of Science* (2025); *Brain and Behavioral Sciences* (2025); *Open Mind* (2025); *Journal of Memory and Language* (2024); *Computational Linguistics* (2024); *PNAS Nexus* (2024); *Cognitive Science* (2023); *Open Mind* (2023)
Conference	CogSci (2024); EMNLP (2023); CoNLL (2023); ACL (2023); EACL (2023); CogSci (2020, 2021, 2022); CoNLL (2021, 2022); ARR (2021, 2022); *SEM 2022; EMNLP 2020; IJCAI 2020; *SEM 2019; IEEE-IRC 2019.
Workshop	Blackbox NLP (2023); ICML Workshop on Large Language Models and Cognition (2024)
Book	Chapman & Hall/CRC Press Statistics Series (2020, 2021).

Service

- **Colloquium Committee**, UT Austin Linguistics (2025–).

- **Admissions Committee**, UT Austin Linguistics (2025–).

- **Hiring Committee**, UT Austin Linguistics Computational Linguistics Search (2025/26).

- **Co-organizer**, UChicago and TTIC Joint NLP Seminar Series (2024–2025).

- **Area Chair/Meta Reviewer**, ACL Rolling Review (ARR) 2024 (Feb, April, June, October); 2025 (Feb - *emergency*, May, October); 2026 (January); CoNLL 2026.

- **Area Chair**, *Linguistic Theory, Cognitive Modeling, and Psycholinguistics*. LREC-COLING 2024.

- **Session Chair**, *Linguistic Theory, Cognitive Modeling, and Psycholinguistics*. ACL 2023 (on-site).

- **Organizer**, *Neural Nets for Cognition*. Discussion group at CogSci 2022.

- **Local Arrangements Chair**, *Annual Meeting of the North American Fuzzy Information Processing Society 2021 (NAFIPS 2021) held at Purdue University*.

- **Program Committee:** CoNLL (2021, 2022).

- **Volunteer**, *36th AAAI Conference on Artificial Intelligence*.

- **Graduate Student Advisor**, *Purdue CIT Student Council*.

- **Organizer**, *Undergraduate Research Panel*, Purdue CIT.

Skills

Programming	Python, R, pytorch, SQL, LaTeX
Natural Languages	English (near-native), Hindi (near-native), Gujarati, Odiya

Software Developed

`minicons`   A toolkit to facilitate behavioral and representational analyses of transformer-based language processing models. [`github`]

Professional Affiliations

- Association of Computational Linguistics (ACL)

- Cognitive Science Society (CogSci)

- Society for Mathematical Psychology (MathPsych)