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Ishita Dasgupta

Researcher in machine learning and computational cognitive science.
25+ publications, 12 in machine learning, 14 in computational cognitive science; h-index 13.
20+ invited talks and panels; see Academic CV.

PROFESSIONAL EXPERIENCE

Senior Research Scientist — Nov 2022 – Present

Research Scientist — Dec 2020 – Oct 2022

DeepMind, New York City

- Using language models in environments with high-dimensional observation and action spaces.
  - Co-led a research team of 6 as part of a 50+ person long-term research effort.
  - Collaborating with language models for embodied reasoning.
    Dasgupta *et al.* NeurIPS Language and Reinforcement Learning (LaReL) 2022; **best paper award**.
  - Distilling internet-scale vision-language models into embodied agents.
    Sumers, ..., and Dasgupta. (senior author) ICML 2023.
- Cognitive abilities (deliberation, reasoning) in large language models.
  - Training data generation and evaluation for multimodal reasoning capabilities in Gemini models.
  - Language models show human-like content effects on reasoning.
    Dasgupta*, Lampinen* et al. arXiv 2022, journal submission in prep.
  - Can language models learn from explanations in context?
    Lampinen, Dasgupta et al. EMNLP 2022.
- First Research Scientist hire at DeepMind NYC; key role in research vision, growth, and culture.
- Several other publications, details on Google Scholar.

Princeton University. Postdoctoral Fellow, Dept. of Computer Science. Jan – Dec 2020

– Analyzing and augmenting representations learned by AI systems, focus on inductive bias & abstraction.
– 8 publications (3 first author), including a NeurIPS Outstanding Main Track Paper award.

EDUCATION

Harvard University, Ph.D. in Physics. March 2020
Thesis: *Algorithms for ecological rationality in humans and machines.*

Indian Institute of Technology Bombay, B.Tech. with Honours in Engineering Physics. August 2014

RECENT AWARDS

NeurIPS Outstanding Main Track Paper. 2022
Using natural language and program abstractions to instill human inductive biases in machines.

Best Paper Award, NeurIPS Language and Reinforcement Learning Workshop. 2022
Collaborating with language models for embodied reasoning.

SKILLS

Machine learning methods; large-scale training and serving.
Online crowd-sourcing platforms: experiment design, collection, and analysis of human behavioral data.
Technical leadership (tech lead for research teams of 5+), mentorship (supervised 5+ junior researchers).

SERVICE

Area Chair (ICLR 2024, NeurIPS 2023, NeurIPS workshops 2022, 2021), extensive peer review.
Volunteering at Harvard Women in Physics, Teach for India Mumbai, DeepMind Scholars.