# Aayush Mishra

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I am passionate about Robust and Explainable Machine Intelligence.

## EDUCATION

Johns Hopkins University

Jan 2022 –

Ph.D. in Computer Science

[transcript]

Indian Institute of Technology, Mandi

Aug 2015 - Jun 2019

Bachelor of Technology in Computer Science and Engineering (with Minor in Management)

[transcript]

#### Work Experience

Microsoft – Data and Applied Scientist

Aug 2021 – Jan 2022

Worked on Product Ranking and Query Understanding, owned Query  $\leftrightarrow$  Product Class Mapping.

 ${\bf Siemens}-Research\ Professional$ 

 $Jul\ 2019-Aug\ 2021$ 

Worked on auditing and validating intelligent systems, NN optimization and identifying data drift.

# Publications

- 3. Repeated Environment Inference for Invariant Learning
  Mishra A., Liu A., at ICML 2022 (SCIS Workshop) [link to paper]
- 2. Novel usage of Model Coverage for Network Pruning, Optimization and Explanation Mishra A., Defensive Publication Siemens, 2020.
- 1. VStegNET: Video Steganography Network using Spatio-Temporal features and Micro-Bottleneck Mishra A., et al, at BMVC, 2019. [link to paper]

# OTHER RESEARCH EXPERIENCE

• Invariant Learning without Environment Labels

under review at ICML 2023

- Chain-of-Thought Prompting LLMs Self-Supervised Learning [course] [link] Fall 2022
- Surgical Tool Segmentation Deep Learning [course] [link]

Spring 2022

• Generating MasterPrints – Bachelor's Thesis [link]

Aug 2018 – May 2019

### Miscellaneous

# • Skills

- Proficient in Python and C++
- Experienced with Python's Machine Learning and Data Science packages.
- Experienced in maintaining quality code on Linux/Windows/Mac environments.

# • Leadership

- Coordinated the activities of Entrepreneurship-Cell at IIT Mandi (2016-17).
- Supervised in terms in research projects at Siemens (2020-21).

# • Volunteering

 Designed and taught an introductory Machine Learning course to high school students in my hometown during the COVID lockdown (Summer 2020).