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 ↔ Product Class Mapping.

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 interns 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).