

Aayush Mishra

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I am passionate about Robust and Explainable Machine Intelligence.

EDUCATION

Johns Hopkins University <i>Ph.D.</i> in Computer Science	Jan 2022 – [transcript]
Indian Institute of Technology, Mandi <i>Bachelor of Technology</i> in Computer Science and Engineering (with <i>Minor</i> in Management)	Aug 2015 – Jun 2019 [transcript]

WORK EXPERIENCE

Microsoft – <i>Data and Applied Scientist</i> Worked on Product Ranking and Query Understanding, owned Query ↔ Product Class Mapping.	Aug 2021 – Jan 2022
Siemens – <i>Research Professional</i> Worked on auditing and validating intelligent systems, NN optimization and identifying data drift.	Jul 2019 – Aug 2021

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
- **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).