Ayush Maheshwari

PhD Candidate (Final Year), IIT Bombay (India)

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Education

Indian Institute of Technology Bombay   **Mumbai, India**
Ph.D. (CSE), Recipient of Ekal Fellowship   *2019–Present*

Advisors: Prof. Ganesh Ramakrishnan & Prof. Manjesh K. Hanawal

Tata Institute of Social Sciences   **Mumbai, India**
M.Sc.   *2013–2015*

University College of Engineering   **Rajasthan Technical University Kota, India**
B.Tech. (CSE)   *2007–2011*

Research Interests

- Develop machine learning based methods that generalize to new domains with limited resources.
- Lexically constrained neural machine translation
- Data programming, semi-supervised learning, subset selection

Experience

Adobe Research   **Bengaluru**
Research Intern, Document Cloud Team   *May 2021 – Aug 2021*

NCETIS, IIT Bombay   **Mumbai**
Project Engineer   *2016–2018*

Water & Climate Lab, IIT Gandhinagar
Junior Research Fellow   *2015–2016*

Tata Consultancy Services   **Mumbai**
Systems Engineer   *2011–2013*

Open-Source contributions

- **SPEAR** : Data-Programming python library to create training data.   Repo link
- **UDAAN** : Post-editing workbench to quickly create publishable translations.   Website

Computer Skills

Programming Languages: Python, C, C++, Javascript/jQuery, Bash, SQL

Libraries: PyTorch, NumPy, scikit-learn

Applications: LaTeX, Google Cloud Platform

Featured Publications

1. **Adaptive mixing of auxiliary losses in supervised learning**
   Sivasubramanian D., **Maheshwari, A.**, Prathosh AP, Shenoy P., Ramakrishnan G.
   AAAI, 2023 (Oral Presentation)

2. **UDAAN-Machine Learning based Post-Editing tool for Document Translation**,
   Maheshwari, A., R. Ajay., Subramanian V., Ramakrishnan G.
   CODS-COMAD Demonstrations, 2023 (Best Demo Paper Award)

3. **Learning to Robustly Aggregate Labeling Functions for Semi-supervised Data Programming**
   Maheshwari, A., Killamsetty K., Ramakrishnan G., Iyer R., Danilevsky M., & Popa L.
   Findings of ACL, 2022

4. **Data Programming using Semi-Supervision and Subset Selection**
   Maheshwari, A., Chatterjee O., Killamsetty K., Iyer R., & Ramakrishnan G.
   Findings of ACL, 2021

5. **Joint Learning of Hyperbolic Label Embeddings for Hierarchical Multi-label Classification**
   Maheshwari A., Chatterjee S., Ramakrishnan, G. & Jagaralpudi S.
   EACL, 2021

6. **DynGAN: Generative Adversarial Networks for Dynamic Network Embedding**
   Maheshwari, A., Goyal, A., Hanawal, M., & Ramakrishnan, G.
   In Graph Representation Learning Workshop at NeurIPS 2019.

Awards & Services

- Best Demo Paper Award in CODS-COMAD 2023
- Awarded prestigious Ekal Fellowship 2020
- Reviewer: ARR 21,22, EMNLP 22, ACL 21,22,23, AAAI 22, EACL 19
- Fully covered grant for attending EMNLP 2022, Abu Dhabi
- Co-Founder at Temples of India - A web and app platform listing $> 690,000$ temples across Indian subcontinent.
- Key Member of Udaan Project - A project to translate education textbooks in Indian languages.

Talks

- SPEAR: Data Programming using Semi-Supervision   [Talk]
  Presented at DECILE WORKSHOP, 2022
- Representation Learning on Graphs
  Presented at IIIT Hyderabad, 2018