

## EDUCATION

---

<b>Ph.D. in Computer Science, University of North Carolina</b> “Data selection for generalization in deep learning models”, Advisor: <a href="#">Prof. Mohit Bansal</a>	Chapel Hill, USA 2019–Current
<b>M.S. in Biomedical &amp; Health Informatics, University of Washington</b> “Extraction of clinical timeline from discharge summaries”, Advisor: <a href="#">Prof. Meliha Yetisgen</a>	Seattle, USA 2015–2017
<b>B.Tech. &amp; M.Tech. in Electronics Engg., Indian Institute of Technology</b> “Mixture Models Based Image Segmentation Algorithms”, Advisor: <a href="#">Prof. Chandan Chakraborty</a>	Kharagpur, India 2010–2015

## SELECTED PUBLICATIONS

---

- Evaluating Long-Term Conversational Memory in LLM Agents**  
*A. Maharana, D. H. Lee, S. Tulyakov, M. Bansal, F. Barbieri and Y. Fang.* ACL 2024. [[pdf](#)]
- D<sup>2</sup> Pruning: Message Passing for Balancing Diversity and Difficulty in Data Pruning**  
*A. Maharana, P. Yadav and M. Bansal.* ICLR 2024 [[pdf](#)]
- Exposing and addressing cross-task inconsistency in unified vision-language models**  
*A. Maharana, A. Kamath, C. Clark, M. Bansal and A. Kembhavi.* TMLR 2024 [[pdf](#)][[webpage](#)]
- Debiasing Multimodal Models via Causal Information Minimization**  
*V. Patil, A. Maharana, M. Bansal.* Findings of EMNLP 2023 [[pdf](#)]
- StoryDALL-E: Adapting Pretrained Text-to-Image Transformers for Story Continuation**  
*A. Maharana, D. Hannan and M. Bansal.* ECCV 2022 [[pdf](#)]
- Integrating Visuospatial, Linguistic and Commonsense Structure into Story Visualization**  
*A. Maharana and M. Bansal.* EMNLP 2021 [Oral][[pdf](#)]
- Improving Generation and Evaluation of Visual Stories via Semantic Consistency**  
*A. Maharana, D. Hannan and M. Bansal.* NAACL 2021 [Oral][[pdf](#)]
- On Curriculum Learning for Commonsense Reasoning**  
*A. Maharana and M. Bansal.* NAACL 2022 [[pdf](#)]
- Video-based Multimodal Intent Discovery**  
*A. Maharana, Q. Tran, D. Seunghyun, F. Dernoncourt, T. Bui, W. Chang and M. Bansal.* Findings of NAACL 2022 [[pdf](#)]
- Adversarial Augmentation Policy Search for Domain and Cross-lingual Generalization in Reading Comprehension**  
*A. Maharana and M. Bansal.* Findings of EMNLP 2020 [[pdf](#)]
- GraDA: Graph Generative Data Augmentation for Commonsense Reasoning**  
*A. Maharana and M. Bansal.* COLING 2022 [[pdf](#)]
- Use of Deep Learning to Examine the Association of the Built Environment with Prevalence of Neighborhood Adult Obesity** (*Invited talk at ICLR SEDL Workshop 2021, covered by Science, Smithsonian*)  
*A. Maharana and E. O. Nsoesie.* JAMA Network [[pdf](#)]
- Analysis of Tree-Structured Architectures for Code Generation**  
*S. Dahal, A. Maharana and M. Bansal.* Findings of ACL 2021 [[pdf](#)]
- Scotch: A Semantic Code Search Engine for IDEs**  
*S. Dahal, A. Maharana and M. Bansal.* DL4C Workshop at ICLR 2022 [[pdf](#)]

15. **Detecting Reports of Unsafe Foods in Consumer Product Reviews**  
A. Maharana, K. Cai, J. Hellerstein, Y. Hswen, M. Munsell, V. Staneva, M. Verma, C. Vint, D. Wijaya, and E. O. Nsoesie. JAMA Network Open [pdf]
16. **Clinical Event Detection with Hybrid Neural Architecture**  
A. Maharana and M. Yetisgen-Yildiz. BioNLP 2017 [pdf]

## EXPERIENCE

---

- Snap Research** Santa Monica, USA  
 Research Intern, Supervisors: [Francesco Barbieri](#), [Yuwei Fang](#), [Sergey Tulyakov](#) Summer 2023  
 – Paper on evaluation benchmark for conversational memory in LLM agents.
- Allen Institute for Artificial Intelligence (AI2)** Seattle, USA  
 Research Intern, Supervisor: [Christopher Clark](#), [Aniruddh Kembhavi](#) Summer 2022  
 – Paper on evaluating and improving cross-task consistency in vision-language models.
- Adobe** San Jose, USA  
 Research Intern, Supervisors: [Walter Chang](#), [Trung Bui](#), [Quan Tran](#), [Franck Dernoncourt](#), [David Yoon](#) Summer 2021  
 – Paper and *patent* on multi-modal methods for intent discovery from Behance video tutorials.
- Sciome** Durham, USA  
 Data Scientist, Supervisor: [Brian Howard](#) 2017–2019  
 – Developed information extraction pipeline for scientific articles; *deployed as product*.  
 – Co-wrote a successful SBIR grant to develop active-learning based information extraction workbench.
- Institute of Health Metrics & Evaluation** Seattle, USA  
 Research Assistant, Supervisor: [Elaine Nsoesie](#) 2016–2017  
 – Developed a novel approach to predict county-level estimates of obesity using satellite imagery  
 – *Invited Talk at ICLR SEDL Workshop 2021*
- IBM Almaden Research Center** San Jose, USA  
 Research Intern, Supervisor: [Cornel Constantinescu](#) Summer 2016  
 – Genomic Data Compression; *work filed for patent*.  
 – Conceived novel delta compression algorithm for 80% efficient storage of files from genomic analysis pipeline.
- German Cancer Research Center** Heidelberg, Germany  
 Research Intern, Supervisor: [Lena Maier-Hein](#) Summer 2014  
 – Shape from Shading: Reconstruction of 3D structure of colon from multiple 2D colonoscopy images.  
 – Proposed novel algorithm to inculcate non-linear information of specularities for reconstruction of colon.

## TEACHING

---

- **Teaching Assistant** at Indian Institute of Technology, Kharagpur Fall 2014  
*Microcontrollers & Microprocessors Laboratory*
- **Teaching Assistant** at Indian Institute of Technology, Kharagpur Spring 2015  
*Digital Signal Processing Laboratory*

## GRANTS AND RECOGNITIONS

---

- CRA-WP Grad Cohort Workshop for Women, New Orleans, LA 2022
- Outstanding Reviewer - ACL-IJCNLP 2021
- Invited Talk at ICLR SEDL Workshop 2021
- Small Business Innovation Research Grant 2018
- PyLadies Travel Grant 2016, 2017
- Schneider Electric Innovation Challenge (Finalist) 2012