

# PRANAV MANERIKER

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## RESEARCH INTERESTS

Natural Language Processing, Structured Data Processing, Uncertainty Quantification, Stylometry, Graph Embedding, ML Auditing, Fairness in ML, Knowledge Graphs, Information Extraction,

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## EDUCATION

### The Ohio State University

MS in Computer Science and Engineering

PhD in Computer Science and Engineering. *GPA: 4.0/4.0*

August 2018 | Present

August 2018 | May 2023

Advisor: Dr. Srinivasan Parthasarathy

### IIT Kanpur

B. Tech. Computer Science and Engineering. *GPA: 9.2/10*

Minor in English Literature

June 2012 | Jun 2016

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## EXPERIENCE

### The Ohio State University

*Research Assistant*

Columbus, Ohio

Aug 2018 | Present

- Built a system for auditing Machine Learning Models for Fairness Properties. Published at KDD 2023, received funding grant from CISCO research.
- Multiple projects lead on semantic and stylistic analysis of text, which lead to a publication at EMNLP and talks at Cambridge Cybercrime conference '23, JHU SCALE '22.

### Johns Hopkins University

*Visiting Research Scholar*

Baltimore, Maryland

Jun 2022 | Aug 2022

- Participated in the [SCALE 2022](#) program on Author Identification (AID). Lead the structure-based approach effort that aimed to utilize graph structure to improve AID.
- Also worked on curating large Reddit datasets for studying scaling laws and demographic properties of author identification models.

### Dataminr Inc.

*Research Intern* Work under NDA

New York City, New York

May 2021 | Aug 2021

### Microsoft Research

*Research Intern*

Redmond, Washington

May 2020 | Aug 2020

- Scaled transformer models to train from scratch on large datasets across multiple nodes.
- Work on malicious URL detection was published at a top security conference (MILCOM).

### Amazon

*Applied Scientist Intern*

Seattle, Washington

May 2019 | Aug 2019

- Worked on fraud detection in the Buyer Fraud team at Transaction Risk Management Systems
- Used ideas from metric learning, and few-shot learning approaches and improved performance and reduced data requirements for fraud detection over the deployed system.

### Adobe Research

*Research Associate*

*Research Intern*

Bengaluru, India

June 2016 | Jul 2018

May 2015 | Jul 2015

- Lead multiple projects in diverse areas including including text summarization, computational creativity, style, causal modeling of interventions with econometric methods, frequent itemset mining based models for large scale prediction.
- Work resulted in multiple patents and publications

### IIT Kanpur

*Teaching Assistant, Introduction to Programming*

*Teaching Assistant, Data Structures and Algorithms*

Kanpur, India

Jan 2016 | Apr 2016

Aug 2015 | Nov 2015

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## SELECTED PUBLICATIONS

- **Pranav Maneriker**, Codi Burley, Srinivasan Parthasarathy, [Online Fairness Auditing through Iterative Refinement](#), KDD 2023
- **Pranav Maneriker**, Yuntian He, Srinivasan Parthasarathy, [SYSML: Stylometry with Structure and Multitask Learning: Implications for Darknet Forum Migrant Analysis](#), Conference on Empirical Methods in Natural Language Processing (EMNLP) 2021.

- **Pranav Maneriker\***, Jack W. Stokes\*, Edir Garcia Lazo, Diana Carutasu, Farid Tajaddodianfar, Arun Gururajan, [URLTran: Improving Phishing URL Detection Using Transformers](#), (MILCOM) 2021
- Nikhita Vedula, Nedim Lipka, **Pranav Maneriker**, Srinivasan Parthasarathy, [Open Intent Extraction from Natural Language Interactions](#), The Web Conference (WWW) 2020, **Best Paper Award**
- Ritwick Chaudhry, Sumit Shekhar, Utkarsh Gupta, **Pranav Maneriker**, Prann Bansal, Ajay Joshi [LEAF-QA: Locate, Encode & Attend for Figure Question Answering](#), Winter Conference on Applications of Computer Vision (WACV) 2020
- Byung-Doh Oh\*, **Pranav Maneriker\***, Nanjiang Jiang\*. [THOMAS: The Hegemonic OSU Morphological Analyzer using Seq2seq](#), (SIGMORPHON Workshop), Association for Computational Linguistics (ACL) 2019
- Balaji Vasan Srinivasan, **Pranav Maneriker**, Kundan Krishna, Natwar Modani. [Corpus-based Content Construction](#), International Conference on Computational Linguistics (COLING) 2018
- Atanu Sinha, Meghanath Macha, **Pranav Maneriker**, Sopan Khosla, Avani Samdariya, Navjot Singh. [Anti-Ad Blocking Strategy: Measuring its True Impact](#), TargetAd and AdKDD (KDD workshop) 2017
- Gaurush Hiranandani, **Pranav Maneriker**, Harsh Jhamtani. [Generating Appealing Brand Names](#), Computational Linguistics and Intelligent Text Processing (CICLing) 2017
- Natwar Modani, **Pranav Maneriker**, Gaurush Hiranandani, Atanu Sinha, Utpal, Vaishnavi Subramanian, Shivani Gupta. [Summarizing Multimedia Content](#) Web Information Systems Engineering (WISE) 2016

\* Denotes shared first authorship. For full list, see [Google Scholar](#)

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#### PATENTS

- **P Maneriker**, R Sasidharan, A Sinha, [Facilitating changes to online computing environment by assessing impacts of temporary interventions](#), US Patent 11,665,073. 2023
- J Stokes, **P Maneriker**, A Gururajan, D Carutasu, E Lazo, [Phishing url detection using transformers](#), US Patent App. 17,246,352. 2022
- BV Srinivasan, **P Maneriker**, N Modani, K Krishna, [Constructing content based on multi-sentence compression of source content](#), US Patent 10,949,452. 2021
- R Sinha, **P Maneriker**, D Singal, A Sinha, [Identifying high value segments in categorical data](#), US Patent 10,929,438. 2021
- A Sinha, M Yadagiri, **P Maneriker**, S Khosla, A Samdariya, N Singh, [Techniques to quantify effectiveness of site-wide actions](#), US Patent 11,093,957. 2021
- BV Srinivasan, SK Saini, K Krishna, Anandhavelu N, T Goyal, **P Maneriker**, C Huesler, [Bundling Online Content Fragments For Presentation Based on Content-Specific Metrics and Inter-Content Constraints](#), US Patent 10,891,667. 2021
- N Modani, V Subramanian, S Gupta, **P Maneriker**, Utpal, G Hiranandani, A Sinha, [Multimedia Document Summarization](#), US Patent 10,762,283. 2020
- **P Maneriker**, A Natarajan, V Gupta, K Basava Raj, [Predicting style breaches within textual content](#), US Patent 10,650,094. 2020
- **P Maneriker**, V Vinay, S Khosla, N Chhaya, N Modani, C Huesler, BV Srinivasan, A Natarajan, [Fact Replacement and Style Consistency Tools](#), US Patent 11,194,958. 2021
- R Sinha, V Palanciuc, **P Maneriker**, M Dash, T Mohandoss, D Singal, [Accurate and interpretable rules for user segmentation](#), US Patent App. 11,200,501. 2021.
- N Modani, V Subramanian, S Gupta, **P Maneriker**, Utpal, G Hiranandani, A Sinha, [Determining quality of a summary of multimedia content](#), US Patent 9,454,524. 2016

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#### SERVICE

- Reviewer: WWW '20, CODS-COMAD ('21, /22 PC) AAAI '21, EMNLP ('21 - '23), ACL '23, KDD '23
- Volunteer Organizer: SIGIR 2019, KDD 2023
- Peer Mentor (GUIDE) at The Ohio State University (2021)

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#### AWARDS AND ACHIEVEMENTS

- **2023 Graduate Research Award** for thesis proposal from the CSE department at OSU, awarded to 5 PhD candidates across the department.
- **2023 Graduate Poster Award** at the Annual Departmental Poster Exhibition, CSE, OSU, awarded to the top 4 posters out of 44 total.

- **Aditya Birla Group Scholarship** (2012 - 2016) Awarded to about 15 students from the top Engineering Schools across India on the basis of academic and co-curricular excellence
- **Academic Excellence Award** (2013) Awarded to top 7% of the students in the university
- **International Collegiate Programming Contest** (ICPC 2014) Positioned 22<sup>nd</sup> among the top 250 teams across India in Amritapuri Regionals.

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#### EXTRA CURRICULAR EXPERIENCE

- Former National Record holder for Rubik's Cube one-handed and fewest moves solving (2013). Also, coordinated the activities of the Rubik's Cube Hubby Group on campus, including organizing an official World Cube Association Competition
- Actively involved in Literary Discussion Group at IIT Kanpur (2013-2016)
- Regular participant in (up to) half marathon distance runs.