

# 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, Language Modeling

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## EDUCATION

### The Ohio State University

August 2018 | Present

MS in Computer Science and Engineering

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

Advisor: Dr. Srinivasan Parthasarathy

### IIT Kanpur

June 2012 | Jun 2016

BTech Computer Science and Engineering. *GPA: 9.2/10*

Minor in English Literature

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## EXPERIENCE

### The Ohio State University

Columbus, Ohio

*Research Assistant*

Aug 2018 | Present

- Multiple projects on semantic, stylistic analysis of text and probabilistic auditing for fairness. Work led to state-of-the-art results and publications at The Web Conf, EMNLP, and KDD.
- Participated in writing successful applications for NSF and industry research grants.

### Johns Hopkins University

Baltimore, Maryland

*Visiting Research Scholar*

Jun 2022 | Aug 2022

- Lead the structure-based effort to improve Author identification (AID) through stylometry at [SCALE 2022](#).
- Curated large Reddit datasets for studying scaling laws and demographic properties of author identification models.

### Dataminr Inc.

New York City, New York

*Research Intern*, Work under NDA

May 2021 | Aug 2021

### Microsoft Research

Redmond, Washington

*Research Intern*

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

Seattle, Washington

*Applied Scientist Intern*

May 2019 | Aug 2019

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

### Adobe Research

Bengaluru, India

*Research Associate*

June 2016 | Jul 2018

*Research Intern*

May 2015 | Jul 2015

- Led projects in diverse areas, including text summarization, computational creativity, and causal modeling of interventions with econometric methods. Work resulted in multiple patents and publications.
- Mentored groups of undergraduate researchers whose projects were published at workshops at KDD and in main conference proceedings at IUI and WACV.

### IIT Kanpur

Kanpur, India

*Teaching Assistant, Introduction to Programming*

Jan 2016 | Apr 2016

*Teaching Assistant, Data Structures and Algorithms*

Aug 2015 | Nov 2015

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## SELECTED PUBLICATIONS

- **Pranav Maneriker**, Codi Burley, Srinivasan Parthasarathy, [Online Fairness Auditing through Iterative Refinement](#), Conference on Knowledge Discovery and Data Mining (SIGKDD) 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.

- Saket Gururkar, Priyesh Vijayan, Srinivasan Parthasarathy, Balaraman Ravindran, Aakash Srinivasan, Goonmeet Bajaj, Chen Cai, Moniba Keymanesh, Saravana Kumar, **Pranav Maneriker**, Anasua Mitra, Vedang Patel, [Benchmarking and Analyzing Unsupervised Network Representation Learning and the Illusion of Progress](#), Transactions of Machine Learning Research (TMRL) 2022.
- **Pranav Maneriker\***, Jack Stokes\*, Edir 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.
- 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](#)

#### SELECTED 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
- 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
- **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
- 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
- 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

#### SERVICE

- PC: WWW '20, CODS-COMAD ('21 - '22) AAAI '21, EMNLP ('21 - '23), ACL '23, KDD '23, SDM '23, IEEE TBD '23.
- Travel Award/Student Volunteer: SIGIR 2019, KDD 2023
- Peer Mentor (GUIDE) at The Ohio State University (2021)

#### AWARDS AND ACHIEVEMENTS

- **Poster Award** (2nd) (2023) place for poster at the Interdisciplinary Research Fall Forum, TDAI, OSU.
- **Graduate Research Award** (2023) for thesis proposal from the CSE department at OSU, awarded to 5 PhD candidates across the department. **Graduate Poster Award** (2023) 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 based on 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 Regional.

#### COURSEWORK | LANGUAGES | FRAMEWORKS

Courses	Computational Linguistics, Parallel Computing, Probabilistic Machine Learning, Optimization
Languages	Python, Java, C++, C, Bash (shell scripting)
Frameworks	PyTorch, TensorFlow, scikit-learn, Git, Pandas, Dask, CUDA