Pranav Maneriker

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Research Interests

Natural Language Processing, Structured Data Processing, Network Science, Knowledge Graphs, Ontologies, Information Extraction, Stylometry, Graph Embedding

Education

The Ohio State University   August 2018 | Present
PhD in Computer Science and Engineering. *GPA: 4.0/4.0*   Advisor: Dr. Srinivasan Parthasarathy

IIT Kanpur   June 2012 | Jun 2016
B. Tech. Computer Science and Engineering. *GPA: 9.2/10*
Minor in English Literature

Experience

The Ohio State University   Columbus, Ohio
Research Assistant   Aug 2018 | Present

- Ontology and relation modeling in transfer learning settings
- Semantic and stylistic analysis of text.

Dataminr   New York City, New York
Research Intern   May 2021 | Aug 2021

- Work currenntly under NDA.

Microsoft Research   Redmond, Washington
Research Intern   May 2020 | Aug 2020

- Malicious URL detection using state-of-the-art NLP models
- Scaled transformer models to train from scratch on large datasets across multiple nodes

Amazon   Seattle, Washington
Applied Scientist Intern   May 2019 | Aug 2019

- Fraud detection in the Buyer Fraud team, Transaction Risk Management Systems
- Nonparametric regression, metric learning, and few-shot learning approaches
- Improved performance and reduced data requirements for fraud detection

Adobe Research   Bengaluru, India
Research Scientist   June 2016 | Jul 2018
Research Intern   May 2015 | Jul 2015

- Natural language processing problems including text summarization, computational creativity and style and affect in text
- Statistical modeling of effectiveness with synthetic control based econometric methods
- Frequent itemset mining based models for large scale prediction
- Experiment design for evaluation of systems
- Work resulted in multiple patents and publications

IIT Kanpur   Kanpur, India
Teaching Assistant, Introduction to Programming   Jan 2016 | Apr 2016
Teaching Assistant, Data Structures and Algorithms   Aug 2015 | Nov 2015

Publications

- **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

- **Pranav Maneriker**, Nikhita Vedula, Hussein S. Al-Olimat, Jiayong Liang, Omar El-Khoury, Ethan Kubatko, Desheng Liu, Krishnaprasad Thirunarayan, Valerie Shalin, Amit Sheth, Srinivasan Parthasarathy. **A Pipeline for Disaster Response and Relief Coordination**, (**SIGIR Demo**) 2019

- Nikhita Vedula, **Pranav Maneriker**, Srinivasan Parthasarathy. **BOLT-K: Bootstrapping Ontology Learning via Transfer of Knowledge**, The Web Conference (**WWW**) 2019

- Paridhi Maheshwari, Nitish Bansal, Surya Dwivedi, Rohan Kumar, **Pranav Maneriker**, Balaji Vasan Srinivasan. **Examplar Based Experience Transfer**, Intelligent User Inverfaces (**IUI**) 2019

- Balaji Vasan Srinivasan, **Pranav Maneriker**, Kundan Krishna, Natwar Modani. **Corpus-based Content Construction**, International Conference on Computational Linguistics (**COLING**) 2018

- Ritwik Sinha, Dhruv Singal, **Pranav Maneriker**, Kushal Chawla, Yash Shrivastava, Deepak Pai, Atanu Sinha. **Forecasting Granular Audience Size for Online Advertising** TargetAd and AdKDD (**KDD workshop**) 2018

- Gaurush Hiranandani, Kumar Ayush, Chinnaobireddy Varsha, Atanu Sinha, **Pranav Maneriker**, Sai Varun Reddy Maram **Enhanced Personalized Targeting Using Augmented Reality**, Poster, IEEE International Symposium on Mixed and Augmented Reality (**ISMAR**) 2017

- 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

PATENTS

- **P Maneriker**, R Sasidharan, A Sinha, **Facilitating changes to online computing environment by assessing impacts of temporary interventions**, US Patent 11,038,785. 2021

- 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

SERVICE

- Reviewer: AAAI 2021, EMNLP 2021

- PC Member: CODS-COMAD 2022

- Subreviewer: WWW 2020

- Volunteer: SIGIR 2019

- Peer Mentor (GUIDE) at The Ohio State University (2021)

AWARDS AND ACHIEVEMENTS

- **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 22nd among the top 250 teams across India in Amritapuri Regionals.

- **IIT JEE, AIEEE** (2012) Ranked 145 among 0.5 million, and 39 out of 1.2 million candidates respectively in National Engineering Entrance examinations

RELEVANT COURSEWORK

Computational Linguistics, Algorithms, Parallel Computing, Probability and Statistics, Probabilistic Machine Learning, Machine Learning for Computer Vision, Optimization, Reinforcement Learning

LANGUAGES AND FRAMEWORKS

Languages	Python, Java, C++, C, Bash (shell scripting)
Frameworks	PyTorch, Tensorflow, scikit-learn, Git

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.