

# NUPOOR GANDHI

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## EDUCATION

### Carnegie Mellon University

August 2020 - Present

*PhD Student*, Machine Learning and Public Policy  
Pittsburgh, PA

### University of Illinois at Urbana-Champaign

August 2016 - May 2020

*Bachelor of Science*, Computer Science  
Minor in Mathematics  
Urbana, IL

Senior Thesis: *Feature-Construction with Social Media Data*

## PUBLICATIONS

N. Gandhi, A. Morales, S. Chan, D. Albarracin and C. Zhai, **Predicting Opioid Abuse with text-based Twitter Features**, Proceedings of the Thirty-Fourth AAAI Conference on Artificial Intelligence, 2020 (*Student Abstract*)

A. Morales, N. Gandhi, S. Chan, **Multi-Attribute Topic Feature Construction for Social Media-based Prediction**, 2018 IEEE International Conference on Big Data (Big Data), Seattle, WA, USA, 2018, pp. 1073-1078. (*Short Paper*)

## RESEARCH

### Graduate Research Assistant, CMU Tsvetshop

September 2020 - Present

Carnegie Mellon University

Advisor: Professor Yulia Tsvetkov, Professor Alex Chouldechova

- Adapting end-to-end coreference resolution model for clinical notes from child welfare (Allegheny County DHS) and medical domains
- Developing low-dimensional vector space to capture domain-independent coreference structure of span representation

### Research Assistant, Text Information Management Analysis Group

University of Illinois at Urbana-Champaign

August 2016 - Present

Advisors: Professor ChengXiang Zhai, Professor Dolores Albarracin

- Predicted outbreaks of sexually-transmitted infections and opioid mortality rates using LDA topic features and document representations on Twitter corpus
- Constructed features to represent regional colloquialisms following geolocation of tweets
- Developed clustering methods for producing interpretable tweet embeddings

### Data Science for Social Good Fellow, Barefoot Law

Imperial College London

June 2019 - August 2019

Advisor: Professor Rayid Ghani, Professor Leid Zejnilovic

- Built an Information Retrieval-based response recommender system to help Barefoot-Law lawyers to reach citizens 60% faster
- Experimented with text-based features to represent citizen questions and lawyer responses

### Team Project, d7: Illinois' Data Science Research Collaborative

University of Illinois at Urbana-Champaign

August 2019 - December 2019

Advisor: Professor Wade Fagen-Ulmschneider

- Analyzed 3,000+ C solutions for memory allocation machine problem in System Programming course CS241
- Visualized evolution of malloc implementations and categories of approach

Research Assistant, **Illinois Geometry Lab**  
University of Illinois at Urbana-Champaign  
Advisor: Professor Sara Clifton

January 2019 - May 2019

- Built an evolutionary dynamics model to understand the conditions under which a bystander effect will emerge

## TALKS

### **Reducing response times to citizen legal questions in Uganda**

*Lightning Talk at KDD 2020 — Social Impact Session*

*Oral Presentation at Data Science for Social Good: DataFest 2019*

### **Predicting Opioid Abuse with text-based Twitter Features**

*Poster Presentation at AAAI Conference on Artificial Intelligence 2020*

### **Natural Selection and the Bystander Effect**

*Poster Presentation at Undergraduate Research Symposium 2019*

### **Multi-dimensional Features for Prediction with Tweets**

*Poster Presentation at ACM Tapia Conference 2018*

### **Predicting Sexually Transmitted Infections with Twitter Data**

*Rapid-Fire talk at Society of Women Engineers Conference 2018*

*Poster Presentation at Illinois Scholars in Undergraduate Research Expo 2018*

## WORK

Software Engineering Intern, **Qualcomm**  
San Diego, CA

May 2018 - August 2018

- Achieved over 10% reduction in memory consumption for transceiver chip
- Spearheaded development of tool to eliminate redundancies in radiofrequency settings data for 5G modem
- Modeled embedded software with Abstract Syntax Trees to automate optimization of memory layout

Software Engineering Intern, **Synopsys**  
Mountain View, CA

May 2017 - August 2017

- Built Machine Learning API to analyze runtime performance of EDA tools
- Developed web-based push notification system for SQL server

## OTHER ACTIVITIES

*Volunteer Data Scientist, Illinois Legal Aid Online (2020)*

*President, Society of Women Engineers (2019 - 2020)*

*External Vice President, Society of Women Engineers (2017 - 2018)*

*Speech and Debate Team (2015 - 2016)*

## AWARDS

*Knights of St. Patrick*, highest award for leadership by College of Engineering 2020

*Illinois Scholars Research Grant*, awarded to Illinois students for excellence in research 2017

*Rapid Fire Research Finalist*, awarded at Society of Women Engineers Conference 2018

*Outstanding Poster Presentation - Science & Mathematics*, awarded at Undergraduate Research Week 2019