

MEGHNA CHAUDHARY

Department of Computer Science and Engineering ◊ University of South Florida, Tampa, FL 33620

[Email](#) ◊ [Homepage](#) ◊ [LinkedIn](#) ◊ [Scholar](#)

EDUCATION

Doctor of Philosophy, Computer Science and Engineering	Expected Graduation: Dec 2022
CGPA: 4.00/4.00	
University of South Florida	Tampa, FL
Master of Engineering, Computer Science and Engineering	Graduation: October 2015
CGPA: 8.54/10.00	
University Institute of Engineering and Technology, Panjab University	Chandigarh, India
Bachelor of of Engineering, Computer Science and Engineering	Graduation: May 2013
Percentage: 72.84/100.00	
University Institute of Engineering and Technology, Panjab University	Hoshiarpur, India

TECHNICAL STRENGTHS

Programming Languages	C, Python, Java, SQL
Software & Tools	TensorFlow, Keras, Scikit-learn, NLTK, Trax

TRAINING

CITI Program	Human Research - Social/Behavioral Investigators and Key Personnel
CITI Program	Responsible Conduct of Research for Engineers
CITI Program	Social and Behavioral Responsible Conduct of Research

PUBLICATIONS

1. **Chaudhary M.**, Sharma R., Chellappan S. (2019) Pairing Users in Social Media via Processing Meta-data from Conversational Files. In: Madria S., Fournier-Viger P., Chaudhary S., Reddy P. (eds) Big Data Analytics. BDA 2019. Lecture Notes in Computer Science, vol 11932. Springer, Cham. https://doi.org/10.1007/978-3-030-37188-3_7
2. **Chaudhary, M.**, Kumar, H., Kaushal, S. et al. The case analysis on sentiment based ranking of nodes in social media space. *Multimedia Tools and Applications* 77, 4217–4236 (2018). <https://doi.org/10.1007/s11042-017-4700-3>
3. **Chaudhary M.**, Kumar H. (2016) A Framework to Rank Nodes in Social Media Graph Based on Sentiment-Related Parameters. In: Satapathy S., Joshi A., Modi N., Pathak N. (eds) Proceedings of International Conference on ICT for Sustainable Development. *Advances in Intelligent Systems and Computing*, vol 409. Springer, Singapore. https://doi.org/10.1007/978-981-10-0135-2_26
4. **M. Chaudhary** and H. Kumar, “Challenges in protecting personnel information in social network space,” *2015 International Conference on Emerging Trends in Networks and Computer Communications (ETNCC)*, Windhoek, 2015, pp. 99-104, doi: 10.1109/ETNCC.2015.7184816.

PRESENTATIONS

1. **Meghna Chaudhary** and Harish Kumar. POSTER: *Social Media Graphs and Cyber Challenges*. 9th Chandigarh Science Congress (CHASCON 2015), Chandigarh, India.

RESEARCH EXPERIENCE

Cyber Identity and Behavior Research Lab

USF Computer Science and Engineering Department

Primary Investigator, Dr. Tempestt Neal

Graduate Research Assistant

January 2020 - Present

Tampa, FL

- Investigating the utility of linguistic and affective features for generating and generalizing mental models.
- Involved in developing the first labelled dataset for COVID-19 pandemic specifically for implicit aspect extraction.
- Developing and assessing a multimodal continuous authentication system designed specifically for elementary-aged children through gamification for handheld smart devices.
- Developing BullsEye, a mobile game facilitating data collection of behavioral data for training deep learning models.
- Conducting a longitudinal study to gather multi-modal data for emotion recognition, activity recognition, gesture and pose recognition, and collaborative interaction analysis, and pervasive sensing technologies.
- Working on the investigation of new modalities for human authentication and activity/gesture recognition in a privacy-preserving and passive way.
- Member of an interdisciplinary research team for USF COVID Rapid Response Grant on *Exploring Racial Disparities in the Treatment, Perceptions, and Tracking of COVID-19 through Automated Stigma Detection and Sentiment Analysis of Social Media Data*.
- Member of interdisciplinary research team funded by Microsoft AI for Health on project *Social Media Trend Analysis to Explore Racial Disparities in the Treatment, Perceptions, and Tracking of COVID-19*.

Computational Sociodynamics Lab

USF Computer Science and Engineering Department

Primary Investigator, Dr. Giovanni Luca Ciampaglia

Graduate Research Assistant Volunteer

August 2020 - Present

Tampa, FL

- Working on epidemiological modeling of information spread involving modeling the competition between true and false news using data-driven methods from epidemiology.
- Working on the Twitter dataset by comparing fact-checking URLs (user responses) with fake news URLs posted as tweets.

Social Computing Research Lab

USF Computer Science and Engineering Department

Primary Investigator, Dr. Sriram Chellappan

Graduate Research Assistant

January 2018 - December 2019

Tampa, FL

- Worked on pairing users on Twitter by processing meta-data from conversational files.
- Employed time series matching techniques for building user topologies based only on user metadata, tweet posts and response patterns, tweet lengths without using tweet content and by preserving users' identities for cases with no tweet deletions and random tweet deletions.

Master's Research Experience

Computer Science and Engineering Department

Primary Investigator, Dr. Harish Kumar

UIET, Panjab University

January 2014 - October 2015

Chandigarh, India

- Developed a feedback system for Panjab University's official Facebook page by ranking users according to their activities on university's Facebook page.
- Performed data collection using GraphAPIs, employed machine learning algorithms and information retrieval concepts for analysing user activities and ranking them for feedback.

WORK EXPERIENCE

USF College of Engineering

Graduate Teaching Assistant

January 2018 - Aug 2020

Tampa, FL

- Assisted more than 150 undergraduate and graduate students in Computer Science and Engineering coursework.
- Assisted in grading, teaching and preparing coursework material for the following subjects:
 - CEN3722 - Human-Computer Interfaces
 - CGS1540 - Introduction to Databases for IT
 - CIS4930/CIS6930 - Social Media Mining
 - COP3515 - Advanced Program Design (Social Media Mining, C, Databases, SQL, Python, etc.).
- Mentored students on how to navigate their college career.

Chandigarh University

Assistant Professor

January 2017 - November 2017

Punjab, India

- Taught programming languages (C and, C++) and helped students to implement different problems on HackerRank.
- In-charge of the Chandigarh University Information Management System of University Institute of Agricultural Sciences department. Participated in the organization of technical and cultural festivals.
- Served as admission counsellor for Computer Science and Engineering department.

UIET, Panjab University

Graduate Teaching Assistant

August 2013 - June 2015

Chandigarh, India

- Assisted undergraduate students in Computer Science and Engineering coursework (Computer Networks, C, and Python) and helped students to conduct experiments in labs.

TATA Teleservices Limited

Engineering Intern

January 2013 - May 2013

Mohali, India

- Studied SDH, NMS, and CDMA and their role in networking.
- Worked on categorizing alarms into different classes according to the seriousness of faults that occur.

National Institute of Electronics and Information Technology (NIELIT) June 2012 - July 2012

Engineering Intern

Chandigarh, India

- Developed a word processing notepad with different features such as font styles, text alignment, spacing, checking spellings and grammar, inserting images, and aligning objects.

Centre for Development of Advanced Computing (C-DAC)

Engineering Intern

June 2011 - July 2011

Mohali, India

- Developed an address book to allow users to save the details of people along with their names, contact numbers, and addresses. Developed features for searching, deleting, and editing contacts.

AFFILIATION AND LEADERSHIP

USF College of Engineering

Student Mentor for Women in Computer Science and Engineering

September 2020 - Present

Tampa, FL

- Member of Women in Computer Science and Engineering (WICSE) organization at University of South Florida.

- Mentor at WICSE Mentorship Program whereby I mentor undergraduate students to help them in resume building, developing communication skills, and advising on how to apply for internships and engage in research labs.

PROJECTS

Using AWS Rekognition for Image Analysis

April 2020

- Developed an AWS Rekognition model to detect image labels, text, and to recognize celebrities from images on the web and classify image context from the labels, text, and people using different confidence levels.

Keystroke Dynamics and System Optimization Using Machine Learning

November 2019 -

December 2019

- Improved the performance and efficiency of an authentication system based on keystroke dynamics by comparing different feature extractors and using machine learning techniques.

Deep Learning model for Game of Deep Learning Ship Dataset from Kaggle

September

2019 - November 2019

- Developed a deep learning model (less than 15 layers) with comparable validation accuracy with Xception model (more than 100 layers) with no statistical significance difference between classifier accuracies.

Using Machine Learning to Develop a Face Recognition System

September 2019 - October

2019

- Developed a Face Recognition system using dimensionality reduction and machine learning and compared different machine learning models to find the model that reduces the generalization loss the most.

Improving the accuracy of CIFER-5 dataset using Deep Learning Models

April 2019

- Fine-tuned the existing model to improve the accuracy of that existing model from 76% to 89.4% and analyzed different parameters and hyperparameters of a convolutional neural network.

HONORS AND ACHIEVEMENTS

All India Council for Technical Education (AICTE) Fellowship

June 2013 - September 2015

- Awarded Graduate Aptitude Test in Engineering(GATE) scholarship by All India Council for Technical Education (AICTE) for 2 years during the course of Master of Engineering.