

# Shrabani Ghosh

sghosh15@charlotte.edu | 757.550.9763 | srbnghosh99.github.io

## EXPERIENCE

### RESEARCH ASSISTANT | UNC CHARLOTTE

May 2022 - present

- Conducted literature reviews, developed research methodologies, and performed data analysis.
- Wrote reports, research articles, and prepared research presentations.

### INSTRUCTOR & TEACHING ASSISTANT | UNC CHARLOTTE

Aug 2020 - May 2025

- Taught Logic and Algorithms course, covering propositional logic, set theory, proof methods, induction and probabilities.
- Designed course projects, assignments, and exams.
- Supervised undergraduate students for projects design and implementations
- Graded assignments and conducted office hours.

## SELECTED PROJECTS

### COMMUNITY DETECTION IN LARGE GRAPHS | SUPERVISED BY DR. ERIK SAULE)

May 2023 - Present | UNC Charlotte

- Investigated community detection algorithms from statistical on Graph Neural Network (GNN) to large graphs for task-based analysis.
- Developing a property-based recommendation system framework to assist data scientists in community detection.

### SCIENTOMETRICS | SUPERVISED BY DR. BOJAN CUKIC

Jan 2022 - Apr 2025 | UNC Charlotte

- Examined different Research Communities from Scholar & DBLP.
- Identified top research topics, influential authors, affiliated organizations, and topics trends over time.
- Identified bias & disparities in-terms of gender and race in research communities.

### SOCIAL MEDIA MINING | Aug 2020 - Aug 2023 | UNC Charlotte

- Investigated Twitter data on Railsafety using topic modeling, sentiment analysis, emotion analysis, and hashtag analysis using LLM.
- Investigated Twitter COVID-19 data to predict unlabeled media bias using a classification model.
- Investigated Twitter Presidential Election data to analyze information propagation in macro-level and micro-level subnetworks.

## SELECTED PUBLICATIONS

- The Role of Community Detection Methods in Performance Variations of Graph Mining Tasks [\[code\]](#) (under review)
- Railroad Trespassing and Safety: A Systematic Analysis of Twitter Data [\[paper\]](#)[\[code\]](#)
- Examining Different Research Communities: Authorship Network [\[paper\]](#)[\[code\]](#)
- A Survey on Signed Graph Embedding: Methods and Applications [\[paper\]](#) (under review)

## RESEARCH INTEREST

Data Science, Graph Theory, NLP, Machine Learning, LLM

## EDUCATION

### UNIVERSITY OF NORTH CAROLINA CHARLOTTE

DOCTOR OF PHILOSOPHY IN  
COMPUTER SCIENCE

Expected Sep 2025

Research Fellowship (Summer 2025)

Cum. GPA: 3.66 / 4.0

### OLD DOMINION UNIVERSITY

M.ENG in COMPUTATIONAL  
MODELING & SIMULATION ENG  
Dec 2019

Full Scholarships (All Semesters)

Cum. GPA: 3.62 / 4.0

## SKILLS

### PROGRAMMING

5+ years:

- Python • PyTorch • C/C++ • NetworkX
- Matlab • HTML/CSS, • Slurm

1+ years:

- Flask • JavaScript

### TECHNOLOGY

- Git/Github • Linux
- MacOS • Windows

## SCHOLARSHIPS

- Future Faculty Teaching Fellowship Award UNC Charlotte (FFTF) 2025
- Graduate School Summer Fellowship Award UNC Charlotte (GSSF) 2025
- Summer Institute in Computational Social Science (SICSS-Atlanta) 2023
- Grace Hopper Celebration Scholarship (GHC) 2022
- Grad-Cohort Conference Scholarship (CRA-WP) 2022

## LEADERSHIP

President, CCI Grads at UNC Charlotte

## LINKS

Github:// [srbnghosh99](#)

LinkedIn:// [sghosh12](#)