

Shrey Gupta

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EDUCATION

- **Ph.D. in Computer Science, Emory University** 2019 - present
Advisor: Dr. Avani Wildani | PhD Thesis: Transfer Learning for Spatio-temporal Data.
- **MS in Computational Biology, IIIT-Delhi** 2015 - 2017
Advisor: Dr. Vinod Scaria | Masters Thesis: A Study of Biomedical Information Extraction Systems.
- **BS in Computer Science, Guru Gobind Singh Indraprastha University** 2011 - 2015
Undergraduate Thesis: Abstractive Text Summarization using Bag-of-words Encoder.

PUBLICATIONS

1. Shrey Gupta, Yongbee Park, Jianzhao Bi, Andreas Zufle, Yang Liu, & Avani Wildani, "**Domain Adaptation Framework for Spatiotemporal Transfer Learning via Component Splitting.**" (In Preparation)
2. Shrey Gupta*, Yongbee Park*, Jianzhao Bi, Andreas Zufle, Yang Liu, & Avani Wildani, "**Transfer across Space via Characteristic Feature: A Case Study for PM2.5 Prediction**" (Under Submission)
3. Shrey Gupta, Alireza Karduni & Emily Wall, "**Belief Decay or Persistence? A Mixed-method Study on Belief Movement Over Time.**" (EuroVis 2023)
4. Shrey Gupta, Jianzhao Bi, Yang Liu & Avani Wildani, "**Boosting for Regression Transfer via Importance Sampling.**" (IJDSA 2023)
5. Aastha Vatsyayan*, Parul Sharma*, Shrey Gupta, ..., Vinod Scaria, "**DALIA - A Comprehensive Resource of Disease Alleles in Arab Population.**" (Plos One 2021)

WORK EXPERIENCE

- **Research Assistant** | Wayne State University Aug'18 - May'19
 - **Detecting seizures in neonatal children using EEG data of the brain (Advisor: Dr. Suzan Arslanturk):**
 - * Applied Bayesian Switching Factor Analysis (BSFA) to map active brain regions during seizures.
 - * Awarded the Richard Barber Interdisciplinary Research Grant for this project.
- **Research Associate** | IGIB Delhi, India May'15 - June'18
 - **A Study of Biomedical Information Extraction Systems (Advisor: Dr. Vinod Scaria):**
 - * Developed a Django-based tool for detecting and extracting disease symptoms from clinical texts.
 - * Deployed the tool at AIIMS, Delhi, enhancing the efficiency by 37% compared to previous clinical tools.
- **Research Intern** | IIT-Madras, India May'14 - Aug'14
 - **Keyword Search in Databases (Advisor: Dr. Rupesh Nasre):**
 - * Developed a database search algorithm that allows natural-language queries instead of SQL commands.
 - * The algorithm improved the time complexity by 18% compared to the predecessor algorithm, BANKS.
- **SWE Intern** | Futor Labs, India May'13 - Aug'13
 - **Database Synchronization (Manager: Saurabh Goel):**
 - * Contributed to database synchronization by developing stored procedures using PL-SQL and MySQL Workbench.
 - * Improved organizational database update efficiency by 54% introducing a one-click solution to synchronization.

TEACHING EXPERIENCE

1. **Course Instructor**
 - CS130R Introduction to Python Programming, Emory University [Fall 2020]
 - CSC 1500 Fundamental Structures in Computer Science, Wayne State University [Spring 2019]
 - CSC 1500 Fundamental Structures in Computer Science, Wayne State University [Fall 2018]
2. **Teaching Assistant**
 - CS170 Introduction to Computer Science, Emory University [Fall 2019]
 - Introduction to Quantitative Biology, IIIT-Delhi [Winter 2017]
 - Computer Architecture, IIIT-Delhi [Monsoon 2016]
 - Computer Networks, IIIT-Delhi [Winter 2016]
 - Computer Systems Management, IIIT-Delhi [Monsoon 2015]
 - Data Structures and Algorithms, IIIT-Delhi [Summer 2015]

AWARDS AND HONORS

- **Travel Grant Recipient**, ACM SIGSPATIAL 2022
- **Conference Grant Recipient**, ACM CIKM 2022
- **Travel Grant Recipient**, USENIX FAST 2020
- **Richard Barber Interdisciplinary Research Fellowship (\$15k)**, Wayne State University, 2019
- **100% Tuition Scholarship for Master's Degree**, DBT India, 2015 - 2017
- **Graduate Aptitude Test in Engineering (GATE) Fellowship**, MHRD, Indian Government 2015 - 2017

VOLUNTEER, SERVICE AND OUTREACH ACTIVITIES

- **Reviewer**, PacificVis [2024]
- **Reviewer**, Human-Robot Interaction (HRI) [2024]
- **Reviewer**, International Symposium on Spatial and Temporal Data (SSTD) [2023]
- **Sub-Reviewer**, ACM EuroSys [2024], IEEE Vis [2022], Usenix HotOS [2020]
- **Student Volunteer**, International Conference on Advances in Geographic Information Systems [2022]
- **Student Volunteer**, International Conference on Information and Knowledge Management (CIKM) [2022]
- **Student Member**, Cohere For AI and ML Collective [2022]
- **Symposium Organizer**, Symposium on Functional Genomics, CCB@IIIT-Delhi, India. [2017]
- **Symposium Organizer**, Symposium on Network Biology, CCB@IIIT-Delhi, India. [2017]