Shrey Gupta

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Education

2019 – present	🔖	**Ph.D.** Computer Science *Emory University* Atlanta, USA Thesis: *Instance Transfer Learning and Complexity Visualization for Scientific Datasets*
2015 – 2017	🔖	**M.Tech.** Computational Biology *Indraprastha Institute of Information Technology* Delhi, India Thesis: *A Study of Biomedical Information Extraction Systems*
2011 – 2015	🔖	**B.Tech.** Computer Science *Guru Gobind Singh Indraprastha University* Delhi, India

Research Experience

2019 – present	🔖	**Graduate Research Assistant,** Emory University, Atlanta, US. *Transfer Learning for PM 2.5 prediction:* Applying Domain Adaptation and Transfer Learning methodologies for prediction on real-world datasets such as PM 2.5 as well as stratifying such distributions based on their complexity. *Advisor: Dr Avani Wildani, Dr. Yang Liu* *Persistence in Bayesian Belief Update:* We analyze how persistent user's updated beliefs are over a period of time when presented with new knowledge. *Advisor: Dr Emily Wall*
Aug'18 – May'19	🔖	**Graduate Researcher,** Wayne State University, Detroit, US. *Detecting seizures in neonates using EEG data:* Mapping the brain regions which are exposed (highly-active) to the seizures by applying Bayesian Switching Factor Analysis *Advisor: Dr Suzan Arslanturk*
May'16 – Dec'17	🔖	**Thesis Student,** Institute for Genomics and Integrative Biology, Delhi, India. *A Study of Biomedical Information Extraction Systems:* A web-based tool to extract symptoms from disease clinical texts, to be used by clinicians/bio-informaticians *Advisor: Dr Vinod Scaria*
May'14 – Aug'14	🔖	**Intern,** Indian Institute of Technology, Madras, India. *Keyword Search in Databases:* Improved algorithmic(time/space) efficiency of Banks, a keyword search algorithm for databases *Advisor: Dr Rupesh Nasre*
May'13 – Aug'13	🔖	**Intern,** Futor Ltd, Delhi, India. *Database Synchronization:* Implemented stored procedures using PL-SQL to achieve synchronization in organizational database *Advisor: Saurabh Goel*

Publications

1 Vatsyayan*, A., Sharma, P., **Gupta, Shrey**, Sandhu, S., Venu, S. L., Sharma, V., … Rajab, A. et al. (2021). Dalia-a comprehensive resource of disease alleles in arab population. *PloS one, 16*(1), e0244567.
🔗 doi:10.1371/journal.pone.0244567

Additional Projects

Aug'19 – Feb'20 ◾ **Mitigating write/update latency in SMR**
Advisor: Dr Avani Wildani
Analyzing and verifying techniques that can help in reducing the latency in SMR drives during the write/update operation and ultimately push us towards generating a novel technique for this.

Aug'16 – Feb'17 ◾ **Online Tool for Reporting of Incidental Findings**
Advisor: Dr Vinod Scaria
Developing a web-based tool that checks if a sequencing data has variants falling on any of the ACMG provided minimum list of 59 genes using a manually curated dataset.

May'16 – Aug'16 ◾ **Causal Inference & Modelling of Datasets**
Advisor: Dr Vikram Goel
Using Markov Blanket to determine causal relationships of the predictor and feature space reduction in a Bayesian network.

Teaching Experience

Spring 2020 ◾ **Course Instructor,** Emory University, Atlanta, US.
Introduction to Python Programming (CS 130R: UG)

Fall 2019 ◾ **Graduate Teaching Assistant,** Emory University, Atlanta, US.
Introduction to Computer Science (CS 170: UG)

Fall 2018 & Spring 2019 ◾ **Course Instructor,** Wayne State University, Detroit, US.
Fundamental Structures in Computer Science (CSC 1501: UG)

2015 – 2017 ◾ **Graduate Teaching Assistant,** IIIT-Delhi, Delhi, India.

1. **[Fall 2015]** Computer Systems Management (CSE 131: UG)

2. **[Spring 2016]** Computer Networks (CSE 232: UG)

3. **[Summer 2016]** Computer Architecture (ECE 511: G)

4. **[Summer 2016]** Data Structures and Algorithms (CSE 102: UG)

5. **[Fall 2016]** Introduction to Quantitative Biology (BIO 213: UG)

*UG: Undergraduate Level Course, *G: Graduate Level Course*

Computational Skills

Languages ◾ Python, R, MATLAB, Shell-Scripting, C/C++, Java, HTML/CSS, SQL/PLSQL, LaTeX

Worked-On ◾ R-studio, Matlab, Eclipse, PyCharm, Jupyter, MySQL Workbench, Django, Spark/Hadoop, Google Cloud

Awards and Honors

2020 ◾ **Travel Grant Recipent**, File and Storage Technologies (FAST 2020), organized by USENIX

2015 ◾ **Complete Tuition Waiver for Master's degree**, Department of Biotechnology, India.

◾ **Scholarship for qualifying the Graduate Aptitute Test in Engineering**, Ministry of Human Resource Development, Government of India.