EDUCATION

Arizona State University, Tempe, AZ *August 2019 - Present*
PhD in Computer Science GPA: 4/4
Coursework: Social Media Mining, Statistical Machine Learning, Natural Language Processing, Data Visualization, Mobile Computing, Fundamentals of Statistical Learning
Current courses: Applied Cryptography

Maulana Abul Kalam Azad University of Technology, West Bengal *August 2013 - July 2017*
Bachelor of Technology in Computer Science GPA: 8.78/10
Coursework: Data Structures, Database Management Systems, Object-Oriented Programming, Operating Systems, Software Engineering, Computer Networks, Artificial Intelligence, Compiler Design.

WORK EXPERIENCE

Ira A. Fulton Schools of Engineering, ASU August 2020 - May 2021
Research Assistant

- Worked on developing a causal inference toolbox in Python using pytorch and tensorflow.
- Worked on a survey on causality in time series.
- Worked on a survey on socially responsible AI.
- Working on generalizing performance of recommender systems with causality methods like counterfactual data augmentation.
- Working on building a model to better estimate long term treatment effects.

Ira A. Fulton Schools of Engineering, ASU August 2019 - June 2020
Teaching Assistant

- Delivered laboratory lectures for Object Oriented Programming (CSE 110) to 180 students.
- Held office hours, conducted review sessions and proctored exams.
- Helf office hours, conducted review sessions and proctored exams for Data Structures And Algorithms(CPI 220) and (CSE 205) and Object Oriented Programming (CSE 110).

Infosys, Hyderabad
Systems Engineer *October 2017 - April 2019*

- Trained in Python, DBMS and various testing frameworks.
- Proposed and implemented automation testing framework using selenium in java for WestPac Bank.

Excellence Tech Pvt. Ltd
Data Analyst Intern *October 2015 - March 2016*

- Worked on a modified version of spell-check algorithm for ecommerce queries.
- Worked on "People Recommendation" to existing users of an ecommerce website.

PROJECTS

Generalizing recommender systems with help of causality models Ongoing
Working on developing a more generalizable model for recommender systems to alleviate or reduce bias with the help of counterfactual data augmentation techniques.

Tech involved: Python, Causal Learning.

Improve long term effect estimation Ongoing
Working on developing a model that can capture both long and short term dependencies between covariates that keep changing over time.

Tech involved: Python, Causal Learning, Time Series Analysis.

Socially Responsible AI January 2021
Helped in writing a survey paper related to recent causality methods proposed to alleviate or reduce biases learned by AI models.

Tech Involved : Causal Learning.

Causality in Time Series Survey paper November 2020
Helped in writing a survey paper related to different causal processes involved in time series like treatment effect estimation, causal discovery. Tech Involved : Causal Learning, Time Series Analysis.

Fake News Detection in Social Media November 2019
Analyzed how to categorize the news data as real or fake based on certain characteristics.

Tech involved: Python, Deep Learning, Natural Language Processing.

Tackling cold start problem in recommendation systems using meta learning and weak supervision August 2020
A novel concept for tackling the user cold start problem in recommendation system using meta learning and weak supervision and taking ratings extracted from user reviews to make better recommendations for new users.
Tech involved: Python, Deep Learning, Meta Learning, Weak Supervision, Natural Language Processing.

A Computer Vision Framework for Partitioning of Image-Object Through Graph Theoretical Heuristic Approach, B.Tech December 2017
A novel concept to develop a graph theoretical computer vision framework to partition shape of an image object into parts based on a heuristic approach such that the partitioning remains consistent with human perception.

TECHNICAL STRENGTHS

Software & Tools	MS Office, Latex
Operating System	Windows,LINUX
Programming Languages	Python,Java,R,HTML,CSS,Pytorch

PUBLICATIONS

A Computer Vision Framework for Partitioning of Image-Object Through Graph Theoretical Heuristic Approach March 2017
Springer Singapore

· A novel concept to develop a graph theoretical computer vision framework to partition shape of an image object into parts based on a heuristic approach such that the partitioning remains consistent with human perception. The proposed framework employs a special polygonal approximation scheme to represent a shape suitably in simpler graph form where each polygonal side represents a graph-edge. The shape-representative graph is explored to determine vertex-visibility graph by a simple algorithm presented in this paper.

Causal Inference for Time series Analysis: Problems,Methods and Evaluation Feb 2021
submitted to KAIS

· A review paper on causality methods applied to time series data. Mainly focuses on two causal inference tasks, i.e. treatment effect estimation and causal discovery for time series data, and provides a comprehensive review of the approaches in each task. Also provides a list of commonly used evaluation metrics and datasets for each task and provide in-depth insight.

Causal Learning for Socially Responsible AI
submitted to IJCAI 2021

· There have been increasing concerns about Artificial Intelligence (AI) due to its unfathomable potential power. To make AI address ethical challenges and shun undesirable outcomes, researchers propose to develop socially responsible AI (SRAI). One of these approaches is causal learning (CL). We survey state-of-the-art methods of CL for SRAI. We review how existing works have succeeded using tools to tackle issues in developing SRAI such as fairness. The goal of this survey is to highlight the potentials and promises of CL for SRAI.

ACHIEVEMENTS

One of the Top Performers at Infosys Mysore Training. March 2018
Ranked 4th in robotics competition held in Techniche-2014 (Tech fest of IIT Guwahati) October 2014