Esha Sharma

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Dissertation Focus - A Unied Machine Learning Framework for Predicting Donations made to Food Banks. Working with two major Food Banks in the United States. Research helps combat food insecurity by addressing the problem of unpredictable supply in humanitarian food supply chains using Machine Learning.
PhD Advisor - Dr Min Chi
Recent Publications -

1. Data to Donations: Towards In-Kind Food Donation Prediction across Two Coasts. Esha Sharma, Lauren Davis, Julie Ivy, Min Chi. IEEE Global Humanitarian Technology Conference, September 2021.
2. Using Twitter to Identify Privacy Information (Poster). E Sharma and J Staddon. IEEE Symposium on Security and Privacy, May 2017
3. Learning a privacy incidents database. PK Murukannaiah, C Dabral, K Sheshadri, E Sharma, J Staddon. Proceedings of the Hot Topics in Science of Security, Symposium and Bootcamp. ACM, 2017
4. How Software Users Recommend Tools to Each Other. C Brown, J Middleton, E Sharma, E Murphy-Hill, IEEE Symposium on Visual Languages and Human-Centred Computing, October 2017

Experiences

North Carolina State University

Graduate Assistant (Computer Science Dept - Center of Educational Informatics) - Since August 2015

- Dissertation Research Focus- Building an integrated system employing time series models, meta-learning tools, latent factors and other machine learning methods for making food bank donations. My research helps food banks function better and is funded by NSF.
- NCSU Security and Privacy Research Lab. Built tools in the news and on Twitter to identify privacy incidents using Natural Language Processing and Machine Learning. This helped in Creating a Privacy Incidents Database.
- Teaching Assistant responsibilities for Automated Learning and Data Analysis, Human-Computer Interaction, Algorithms for Data Guided Business Intelligence Course, and Software Engineering. Led discussions and workshops facilitated presentations, held problem-solving sessions and help sessions, designed and graded homework assignments and exams.

Performigence Corporation

Student Research Intern - June 2019 to August 2019

- Obtained and preprocessed datasets from LA and NC food banks.
- Analysed structure and patterns in the data.
- Built models to predict donations made to Food Bank.
- Analysed requirements and data available to help build an intelligent system for food bank operations.

Bank of America

Derivatives and FX Technology Teams - July 2011 to April 2015

- Team Leader. Wrote software to consolidate, standardize and unify data received in different formats from various bank systems. Created Tableau visuals from consolidated data to identify potential errors.
- Senior Technical Associate. Wrote software to consolidate and validate data received from different systems of the bank. Wrote software to identify potential errors and to create insightful reports from data.

Education

PhD in Computer Science

North Carolina State University

Expected Graduation May 2023

Master of Computer Science

North Carolina State University

BTech in Computer Science

Amity School of Engineering & Technology

Skills

Machine Learning

- Time Series Analysis
- Deep Learning
- Ensembling
- Meta-Learning
- Supervised and Unsupervised Learning
- Research

Programming

- Python
- R
- Java

Data Technologies

- Tensor Flow
- Keras
- SciPy
- Numpy
- Scikit Learn
- Time Series Models

Financial Markets

- Certified by Stratadigm Education while at Bank of America
- FX and Derivatives