Jade Zhang

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EDUCATION_____

MASTER OF SCIENCE, ECONOMICS AND COMPUTER SCIENCE (GPA: 3.66/4.00)   Expected: 09/2023
  Drexel University | Philadelphia, PA

MASTER OF SCIENCE, BUSINESS ANALYTICS (GPA: 4.00/4.00)   05/2021
  Clark University | Worcester, MA

BACHELOR OF SCIENCE, APPLIED MATHEMATICS   05/2019
   University of Maryland, College Park | College Park, MD

AREAS OF EXPERTISE_____

CORE SKILLS: Statistical Modeling | Data analysis | Data Visualization| Machine Learning | Optimization | Research & Analysis |
      Communication & Presentation

PROGRAMMING LANGUAGES & SYSTEMS: Python | R | Java | SQL | MATLAB | SAS | C/C++ | Git | Tableau | Microsoft Excel

PROJECT EXPERIENCE (CONFERENCE PRESENTATION)_____

*Conducted comprehensive research projects using **big data analysis** and **statistical modeling,** presented at **international top-tier confereces** in fields of **forecasting and information science**, and collaborated with researchers across the country in various fields.*

CHOOSING AGGREGATION LEVELS FOR FORECASTING AND FAIRNESS (Statistical Modeling, Forecasting, Clustering, Python) | Link   07/2022
International Symposium on Forecasting | Oxford, England | ZHANG, J., LEE, J., DU, L., SCHNEIDER, M. J.
  - Proposed a hierarchical forecasting scheme to forecast yearly college enrollment regarding race/ethnicity.
  - Created a bisecting hierarchical clustering algorithm to cluster time series and implemented the algorithm.
  - Performed hierarchical forecasting using statistical models.
  - Increased the forecast accuracy by 15% compared to the conventional enrollment forecasting scheme.
  - Provided a new method for institutions to modify their fairness presentation across groups by aggregating data.

DETERMINANTS OF CAR ACCIDENT SEVERITY (Big data analysis, Machine Learning Classification, Prediction, Python) | Link   11/2020
INFORMS Annual Meeting | ZHANG, J., WU, Z., FAN J., YOU, C., GAO, Y.
  - Cleaned unstructured data that yielded ~200 features and ~130,000 observations and used Tableau for visualization.
  - Applied feature engineering and multiple machine learning classifiers (Logistic Regression, Decision Tree, SVM, KNN) to investigate the determinants of car accidents and yielded accuracy >= 85% and AUC >= 0.9.
  - Found that gender is surprisingly one of the most crucial indicators of the personal injury level, which provides significant insights for car manufacturers and safety testers.

INVESTIGATING POTENTIAL BIAS IN THE DEVELOPMENT OF A TYPICAL AI PLATFORM FOR HEART TRANSPLANTATION | Link   11/2020
INFORMS Annual Meeting | ZHANG, J., WU, Z., SHI, Y., YOU, C., DOLATSARA, H. **(Statistical modeling, Regression Analysis, R)**
  - Utilized multiple statistical tests to investigate if there is a significant bias in the predictive outcomes of a typical heart transplant decision-making platform. Revealed the existence of gender bias and regional bias.

TIME SERIES DATA IDENTIFICATION AND OPTIMIZATION WITH THE MEASUREMENTS OF POTENTIAL BIAS AND DISCRIMINATION ISSUES BASED ON PSEUDO-BOOLEAN FUNCTIONS (Clustering, Mathematical Modeling, MATLAB) | Link   01/2022
International Symposium on Artificial Intelligence and Mathematics | Fort Lauderdale, FL | LEE, J., DU, L., **ZHANG, J.**, SCHNEIDER, M. J.
  - Assisted collaborators in developing the most generalizable fairness metric based on pseudo-Boolean functions.
  - Collaborated with others in implementing the MATLAB program for a new aggregation/clustering method.
  - Composed the data section of the corresponding paper (*Total fairness: conditional parity using pseudo-Boolean functions*) that targets the peer-review academic journal, *Operations Research Letters*.

WORK EXPERIENCE_____

GRADUATE RESEARCHER| Drexel University | Philadelphia, PA   08/2021 – 12/2022
  - Completed multiple research projects and presented at top-tier conferences.

GRADUATE TEACHING ASSISTANT | Drexel University | Philadelphia, PA   08/2021 – 12/2022
  - Supported Introduction to *Analysis II, Linear Models for Decision Making, Six-Sigma Quality Implementation, Operations and Supply Chain Management*, Instructed *Fundamentals of Management Information Systems*

RESEARCH ASSISTANT | Clark University | Worcester, MA   12/2019 – 05/2021
  - *"Investigation of Smart Meter Adoption", "E-Government Development in China", "Market Price Forecasting"*

GRADUATE TEACHING ASSISTANT | Clark University | Worcester, MA   08/2019 – 05/2021
  - Supported Introductory *Computer Programming and Animation, Database Management and SQL Programming for Analytics, Data Structures, and Introduction to Computing.*