CONTRACTOR
Experience
Contractor
July 2017 to Current Carestream
Data Scientist

- Conduct experiments and analyze data; perform comparative analyses from former experimental data.
- Develop intricate algorithms based on deep-dive statistical analysis and predictive data modeling that were used to deepen relationships, strengthen longevity and personalize interactions with customers.
- Analyze and process complex data sets using advanced querying, visualization and analytics tools.
- Identify, measure and recommend improvement strategies.

Research Assistant Intern
February 2017 to July 2017 Yahoo!

- Conducted various research studies, interacting with participants, collecting information, setting up programs, and instructing participants on tasks they need to complete Identified suitable techniques for the collection and analysis of data.
- Ensure the validity and reliability of data at all times.
- Performed data coding, data entry, transcribing, data analysis & assistance with writing up.
- Responsible for maintaining resource archives for both computer files and hard copy materials.
- OPL linear programming model development, implementation and enhancement Translated users' production crop placement requirements into corresponding mathematical models with IBM ODM tools Developed and enhanced MIP models for company's crop placement problems at multiple regions/countries with CPLEX Used simulation and statistical methods to maintain and improve crop safety stock models in multiple regions/countries Assessed and analyzed problems using SQL Communicated, supported and maintained solutions with users and clients Tools: OPL, CPLEX, Scala Microsimulation Model Using Christiana Care Early Warning System (CEWS) to Evaluate Physiological Deterioration Simulated and analyzed inpatients considering Early Warning Scores (EWS) in hospital Evaluated patient health conditions, nurse staffing, and cost implications on timely rescue for patients needing Proposed a global microsimulation model includes empirical and logistics regression sub models Provided insights analysis into implications of patients, and polices using simulation model Explored possible intervention policies on mortality, length of stay, average percent time over some CEWS levels Tools: R, Microsimulation Warehouse Labor Scheduling Design and Optimization Optimized warehouse labor costs for a healthcare supplies distributor Proposed an unrelated parallel machine scheduling model considering job splitting and machine eligibility for the distributor's warehouses Built a mixed-integer programming model for the problem and solved it optimally using CPLEX-Java API Developed a meta-heuristic to find efficient solutions within one minute Implemented the heuristic which requires approximately 11% less work than historical schedules on average Tools: Java, CPLEX Facility Location with Uncertainty Demand Optimization Use of Social Media by Disaster Relief Organizations for Improved Response Outcomes Investigated costs associated with acting on a new class of uncertain data in disaster relief activities (social data) prior to its verification in context of facility location problem Employed broad range of exact optimization (i.e.
- linear programming) approaches Proposed three strategies that can be used by an emergency manager faced with a POD location decision for which both verified and unverified data are available Assessed performance and effectiveness of alternative social data decision policies across wide variety of demand scenarios.

Accomplishments

- Tools: Java, CPLEX, ArcGis Logistics Network Design and Optimization Heuristic Algorithms Design and Implementation Developed and implemented algorithm to find optimal routes under existing delivery schedule for a regional chain to deliver food to over 100 stores in six states throughout the Northeast Proposed improved delivery schedule by fully utilizing sleeper cabs to allow over-night routes Designed and implemented heuristic algorithms to create over-night delivery plan that reduced transportation costs by 30% compared to current schedule Tools: Java, Matlab PUBLICATIONS Li, B., Hernandez, I., Milburn, A.B., Ramirez-Marquez, J.
- Integrating uncertain user-generated data in disaster relief facility location.
- Socio-Economic Planning Sciences, accepted.
- Li, B., Milburn, A.B., Mason, S.
- A Heuristic for Scheduling Unrelated Parallel Machines Subject to Job Splitting, under review.
- Li, B., Milburn, A.B., Rossetti, M.D.
- Methods for Analyzing Fiscal Calendar Effects within an ERP System.
- International Institute of Industrial Engineers (IIE Conference), Anaheim, CA, May 2016.
- Li, B., Milburn, A.B.
- 2014.
- Scheduling workers in a warehouse based on productivity performance.
- Medline project final report.
- Prepared for the Center for Excellence in Logistics and Distribution at the University of Arkansas.
- Li, B., Milburn, A.B., Mason, S.
- Heuristic approach for an unrelated parallel machine scheduling problem with ready times and due dates.
- Presented at the INFORMS Annual Meeting, Philadelphia, PA, November, 2015.
- Li, B., Hernandez, I., Milburn, A.B., Ramirez-Marquez, J.
- Integrating uncertain data in disaster relief facility location.
- Presented at the INFORMS Annual Meeting, San Francisco, CA, November, 2014.
- Li, B., Milburn, A.B.

- Scheduling workers in a warehouse based on productivity performance.
- Presented at the INFORMS Annual Meeting, Minneapolis, MN, October 2013.

Education
Ph.D : Industrial Engineering , 2018 University of Arkansas Industrial Engineering GPA: 3.8/4.0
Master : Management Science and Engineering , 2012 Beijing Institute of Technology Management Science and Engineering GPA: 3.7/4.0
Bachelor : Management Science and Engineering , 2009 China University of Petroleum China Management Science and Engineering GPA: 3.5/4.0
Summary
Solutions-focused Data Scientist with experience in conducting research, providing data analysis, designing and implementing statistical / predictive models and cutting edge algorithms as well as evaluating and developing viable solutions to issues across business, transportation, and healthcare sectors. Creative thinker, recognized for providing innovative vision, and the ability in communicating effectively with professionals across different levels and disciplines to build highly effective cross-functional teams. Exemplify remarkable analysis, documentation, research, and advocacy expertise, coupled with outstanding leadership, organizational, and management qualities and highly effective writing and presentation skills. Proficient with computing languages (Java, C, C++, Matlab, Python), simulation (Arena), statistics (R) and optimization solver (
Certifications
AREAS OF EXPERTISE Data Analysis Decision Analytics Predictive Modeling Data-Driven Personalization Big Data Queries and Interpretation Data Mining and Visualization Tools Writing/Presentation Business Intelligence (BI) Research, Reports and Forecasts
Languages
Fluent in Mandarin (Native), and English (Fluent).
Skills
API, Big Data, BI, Business Intelligence, clients, Data Analysis, data entry, Data Mining, data modeling, Modeling Data, English, experiments, IBM, instructing, Interpretation, Java, logistics, Mandarin, materials, Optimization, policies, coding, programming, Research, safety, Scheduling, simulation, SQL, staffing, statistical analysis