Wang Yao

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SUMMARY

5+ years experience in data science and machine learning, a well-trained scientist in mathematical optimization and algorithm development, passionate presenter with extensive knowledge in numerical methods for solving large scale statistical learning problems.

EDUCATION

Ph.D. in **Operations Research**, **Rutgers University, New Brunswick, NJ**   2010-2016
B.A. in **Mathematics**, Minor: **Statistics**, **Rutgers University, NJ**. *Magna Cum Laude* 2006-2010

RESEARCH

Ph.D. Dissertation: Approximate Versions of Alternating Direction Method of Multipliers
- Developed 3 new numerical algorithms for **multi-block optimization** models in machine learning
- Implemented new engine for common optimization problems in ML with **Matlab**, wrote a library including **conjugate gradient, L-BFGS, FISTA** and **gradient decent** algorithms as sub-solvers
- Overall computing overhead is reduced by 30% compared with classical frameworks

AWARDS

Honeywell Bravo Employee Recognition Award   June 2017

WORK EXPERIENCE

Honeywell International Inc.   **Data Scientist, Data Science CoE**   Oct. 2016 - Present
- Interacted with the implementation team, data scientists in advising, mentoring and presenting
- Led data engineers to cleanup over 1 TB raw power consumption data on **Azure** cluster using **pyspark** and **Hive** database
- Implemented **RBF Neural Network** with **R** for short-term power load **time series** prediction
- Performed population segmentation with **sparklyr** by utilizing external property data and trained power usage model on segment level
- Increased customer's revenue by 5% by deploying an energy theft detection model using water usage and smart meter events/status data

Chubb Corporation Claim Actuarial Modeler, Advanced Analytics   May 2015 - Oct. 2016
- Performed data engineering on ~10 million rows of claims/medical data to create ~100 variables
- Built decision tree severity model for 7-Eleven bodily injury claims at first contact and logistic regression model at 6-month evaluation point using **SAS EG**
- Conducted **social network analysis** and established network-revenue model for underwriters with **iGraph**, helped performers to create more revenue by a margin of 5%
- Created **SAS** codes for monitoring and tracking model performance in production system

Novartis Pharmaceuticals   **Intern, Advanced Quantitative Science**   May - Aug. 2014
- Designed an interactive web application for clinicians to compare numerical simulation results of dosage selection for different groups of patients
- Implemented a web service using **Linux**, **Apache** web server, along with **MySQL**, **Python** and **R** for server-side, **Javascript** and **HTML5** for client-side programming

DHS - Rutgers CoE (CCICADA)   **Advanced Analytics Researcher**   Jan.-Jun. 2013
- Captured and analyzed complex information given by U.S. Coast Guard to establish the optimal boat-allocation integer programming model with **Xpress-Mosel**
- Recommended the best boat-sharing plan for U.S. Coast Guard to cover required mission hours under tight budget and presented the analysis and delivered the product to the C-level management

Eli Lilly and Company   **Intern, Data Visualization**   May - Aug. 2012, and Jul. - Dec. 2013
- Tested extensively the Bioprocess Data Collection System Data Mart(BDCSDM) using **SQL**
- Automated the visualization tool to be database driven, eliminating maintenance overhead
- Developed automated filtration experiment data acquisition application to interface with previously under-utilized costly advanced **IoT** equipments