

## Wang Yao

Phone: (732) 447-6825 E-mail: yaowang74@gmail.com Work Authorization: **U.S. Citizen**

### SUMMARY

5+ years experiences 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 with Matlab and C++, wrote a library including **conjugate gradient**, **L-BFGS** and **steepest decent** methods as sub-solvers
- Overall computing overhead is reduced by 30% compared with classical frameworks

### WORK EXPERIENCE

**Honeywell** **Data Scientist, COE** Oct. 2016 - Present

- a
- b
- c
- d

**Chubb Corporation** **Actuarial Modeler, Advanced Analytics** May 2015 - Oct. 2016

- Performed data engineering on ~10 million rows of claims/medical data to create variables. Built **decision tree** severity model for 7-Eleven bodily injury claims at first contact and **logistic regression** model at 6 months evaluation point
- Carried out the underwriters social network analysis with **R** and **iGraph** to identify the key features that differentiate successful performers.
- Established the **SVM** network-revenue model to help underwriters create more revenue by a margin of 10%

**Novartis Pharmaceuticals** **Quantitative Science Intern** May - Aug. 2014

- Developed and designed web application for clinicians to compare simulation results and test hypothesis using **Linux**, **Apache** web server, along with **MySQL**, **Python** and **R** on back-end; **Javascript** and **D3.js** for front-end visualization

**Eli Lilly and Company** **Data Visualization Intern** May - Aug. 2012, Jul. - Dec. 2013

- Tested extensively the Bioprocess Data Collection System Data Mart(BDCSDM) with **SQL**
- Automated the visualization tool to be database driven thereby eliminating maintenance overhead
- Developed a data acquisition application to interface with the advanced **IoT** equipment costing over \$200K

**DHS-Rutgers COE** **Advanced Analytics Researcher** Jan.-Jun. 2013

- Captured and analyzed complex information given by U.S. Coast Guard to establish the optimal boat-allocation 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 to C-level management