JiaLei Wang

503 Summerhill Dr, Apt 3, Ithaca, NY 14850
(917) 855-0568 | jw865@cornell.edu

EDUCATION

Cornell University **Ithaca, New York**
Ph.D in Operations Research & Information Engineering Expected 2016
- Major GPA: 3.9 / 4.0 Cumulative GPA: 3.8 / 4.0
- Advisor: Peter I. Frazier, Assistant Professor in Department of Operations Research
- Minor: Computer Science, Computational Science and Engineering

University of Illinois at Urbana-Champaign **Urbana, Illinois**
B.Sc in Physics 2009-2011
- Major GPA: 4.0 / 4.0 Cumulative GPA: 3.9 / 4.0
- Honors: University Honor (the Bronze Tablet);
  Department Highest Distinction

Nanyang Technological University **Singapore**
B.Sc in Physics (incomplete) 2007-2009
- Major GPA: 5.0 / 5.0 Cumulative GPA: 4.9 / 5.0

Relevant Course: Advanced Machine Learning, Robot Learning, Probability Theory, Statistical Inference, Heuristic Optimization, Mathematical Programming, Simulation, Object-Oriented Programming & Data Structures.

RELEVANT SKILLS

Development: C/C++, Python, Java, MATLAB, CUDA, R and Shell script
Mathematics: Data Mining, Statistical Modeling, Optimization, Numerical Analysis, Dynamic Programming
Computer Science: Machine Learning, Parallel Programming, Object-Oriented Programming

WORK EXPERIENCE

Software Engineer Intern **San Francisco, CA**
Yelp Inc. Ads targeting team May 2014 – August 2014
- Developed GPU parallel programming module of the open sourced software package "Metrics Optimization Engine" (github.com/Yelp/MOE) using CUDA C, which obtains up to 100X speedup than its CPU counterpart.

RESEARCH

Cornell University, Department of Operations Research **Ithaca, New York**
Research Assistant May 2012 – present
Relevant fields: Data Mining; Global Optimization; Bayesian Statistics.
Selected Projects:
- **Bayesian Global Optimization for Parallel Sampling** (implemented in open sourced package MOE)
  - We model an unknown, expensive to evaluate and derivative free function using Gaussian Process.
  - Use Value of Information analysis to iteratively sample points in batch to search global optimum. This routine balances exploration vs. exploitation, making it an efficient global optimization method.
  - We collaborated with engineers from Yelp and implemented this algorithm in a high performance open sourced software package called Metrics Optimization Engine, available in github.com/Yelp/MOE

- **Sequence Optimization using Optimal Learning** (2014 INFORMS Data Mining Section best student paper finalist)
  - We address biological sequence optimization problems and formulate them as an active learning problem.
  - We proposed a greedy based optimal learning method and proved performance guarantee using sub-modularity.

- A direct application is to design reversible labeling peptides.

AWARDS

- 2014 INFORMS Data Mining Section best student paper finalist 2014
- University Honor at University of Illinois at Urbana-Champaign for academic excellence 2011
- Department highest distinction in Physics, University of Illinois at Urbana-Champaign 2011
- Department Dean's List in Nanyang Technological University 2009
- China Precision Scholarship Award for academic excellence 2009
- 1st prize in Chinese Physics Olympiad 2007
- 1st prize in Chinese Mathematical Olympiad 2006
- 1st prize in Chinese Physics Olympiad 2006
- 1st prize in Chinese Physics Winter Camp 2006
- 2nd prize in Chinese Physics Olympiad 2005