Datong Paul ZHOU

2737 Woolsey St
Berkeley, CA 94705
United States of America

+1 510-517-0733
datong.zhou@berkeley.edu
people.eecs.berkeley.edu/~datong.zhou/

EDUCATION

University of California, Berkeley   Berkeley, CA
PhD, Mechanical Engineering. Current GPA: 3.98/4.0   08/2014 – 12/2018
- Academic Adviser: Prof. Claire J. Tomlin (EECS)
- Award: Berkeley Fellowship for Graduate Study (top scholarship for doctoral students)
- Expertise: Machine Learning, Online Learning, Algorithms, Experimental Design, Statistical Hypothesis Testing, Data Mining, Control and System Theory, Game Theory

MS, Electrical Engineering and Computer Sciences. GPA: 4.0/4.0   08/2015 – 05/2016
- Statistical Learning Theory, Machine Learning, Stochastic Processes, System Theory

MA, Mathematics. GPA: 4.0/4.0   08/2016 – 05/2018
- Optimization, Dynamical Systems, Differential Equations, Numerical Mathematics

Technische Universität München   Munich, Germany
BS, Mechanical Engineering. GPA in top 1% of class   10/2011 – 03/2014
- Focus: Computational Mechanics, Control Theory

EXPERIENCE

Facebook, Inc.   Seattle, WA
Software Engineer Intern, News Feed Backend Machine Learning Team   05/2018 – 07/2018
- Trained classifiers using Neural Networks and Boosted Decision Trees to predict likelihood of 10 million users per day forwarding public content to their friends
- Set up logging and data processing pipelines in PHP and Hive to extract user and content features (>100 million rows per day) in real-time
- Increased Click-Through Rate of forwarding public content in Messenger by 50%
- Implemented an online learning framework to adaptively show content to users

OhmConnect, Inc.   San Francisco, CA
Consultant and Subcontractor   08/2015 – 06/2018
- Set up randomized experiments and performed A/B testing to achieve 14% treatment effect of monetary incentives on reduction in peak-hour electricity usage of 7000 users
- Validated findings with time-series analysis and regression in scikit-learn and pandas
- Used optimization algorithms to target best users to increase per-dollar yield by 40%

University of California, Berkeley   Berkeley, CA
Graduate Student Researcher   08/2014 – present
- Forecasted electricity consumption with Hidden Markov and Gaussian Mixture Models
- Implemented real-time HVAC control schemes to optimize buildings' energy efficiency
- Extended the Multi-Armed Bandit problem to a setting with budget constraints
- Authored 12 articles in peer-reviewed conferences (9 accepted, 3 in review)

Massachusetts Institute of Technology (MIT)   Cambridge, MA
Visiting Scholar   09/2016 – 12/2016
- Designed human-in-the-loop control algorithms for electricity consumption models
- Modeled peer effects and social influence in networks by utilizing smart meter data
- Estimated the cost of crowdsourcing in energy systems with statistical inference

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SELECTED PUBLICATIONS

- **D.P. Zhou** and C.J. Tomlin. Budget-Constrained Multi-Armed Bandits with Multiple Plays. *Proceedings of the 32nd AAAI Conference on Artificial Intelligence, 2018.*
- **D.P. Zhou**, Q. Hu, and C.J. Tomlin. Quantitative Comparison of Data-Driven and Physics-Based Models for Commercial Building HVAC Systems. *Proceedings of the 2017 American Control Conference.*
- **D.P. Zhou**, M. Balandat, and C.J. Tomlin. A Bayesian Perspective on Residential Demand Response Using Smart Meter Data. *54th Annual Allerton Conference on Communication, Control, and Computing, 2016.*

SKILLS AND INTERESTS

- Skills: Python, Java, C++, PHP, SQL, Apache Hive, HTML, scikit-learn, pandas, Unix/Linux, MATLAB
- Interests: Triathlon, piano, chess