

# Datong Paul ZHOU

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## EXPERIENCE

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### Facebook, Inc.

Senior Research Scientist, Facebook Communities

Seattle, WA  
02/2020 – current

- Scaling the Online Events product by >20% through ranking and user targeting
- Technical lead of a team of 5 ranking engineers
- Intern manager, new hire (bootcamp) mentor, and regular interviewer

### Facebook, Inc.

Research Scientist, Facebook Groups

Seattle, WA  
01/2019 – 02/2020

- Personalized groups content distribution to Facebook users through ranking
- Built a unified feature extraction framework across different tech stacks

### Facebook, Inc.

Software Engineer Intern, News Feed Backend Machine Learning Team

Seattle, WA  
05/2018 – 07/2018

- Trained classifiers using Neural Networks and Boosted Decision Trees to predict likelihood of users forwarding public content to their friends in Messenger
- 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
- Implemented an online learning framework to adaptively show content to users

### OhmConnect, Inc.

Consultant and Subcontractor

San Francisco, CA  
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%

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## EDUCATION

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### University of California, Berkeley

PhD, Mechanical Engineering. GPA: 3.98/4.0

Berkeley, CA  
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

### Massachusetts Institute of Technology (MIT)

Visiting Scholar

Cambridge, MA  
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

### Technische Universität München

BS, Mechanical Engineering. GPA in top 1% of class

Munich, Germany  
10/2011 – 03/2014

- Focus: Computational Mechanics, Control Theory

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## SELECTED PUBLICATIONS

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- **D.P. Zhou** and C.J. Tomlin. [Budget-Constrained Multi-Armed Bandits with Multiple Plays](#). *Proceedings of the 32<sup>nd</sup> 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](#). *54<sup>th</sup> Annual Allerton Conference on Communication, Control, and Computing*, 2016.

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## SKILLS

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- Python, Java, C++, PHP, SQL, Apache Hive, HTML, scikit-learn, pandas, Unix/Linux, MATLAB