Yuchao Liu

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EXPERIENCE

YouTube Inc. / Google Inc.   San Bruno, CA
Data Scientist, Research   *Jul 2021 - Present*

- Developed metrics measuring YouTube Premium profitability. Analyses include ads-subscription unit economics research, user life-time value modeling and observational causal inference on price change
- Analyses assisted YouTube Premium price changes decisions in 40+ countries, affecting 50M+ users
- Helped launch several revenue channel optimization experiments, bringing multi-million additional margin to YouTube business
- Pioneer work in designing and analyzing novel experiments to understand dynamics within YouTube paid products' ecosystem and user behaviors

Last Mile Delivery, Amazon Inc.   Bellevue, WA
Research Scientist   *Jul 2020 - Jul 2021*

- Built a new Amazon Flex driver ID fraud detection machine learning model from scratch and launched in EU, UK, JP and the US

Microsoft Advertising, Microsoft Corporation   Bellevue, WA
Data Scientist   *Apr 2018 - Jul 2020*

- Designed and implemented machine learning algorithms for conversion prediction and ads pricing. Analyses led to better pricing decisions and advertiser ROIs in many major Microsoft Ads platforms

Mitsubishi Electric Research Labs   Cambridge, MA
Research Scientist Intern   *Jun 2017 - Sept 2017*

BioMarin Pharmaceutical   Brisbane, CA
Biostatistics Intern   *Jun 2016 - Aug 2016*

EDUCATION

Department of Mathematics, University of California San Diego   La Jolla, CA
PhD, Mathematical Statistics; GPA: 3.98/4.00   *Sept. 2013 – Mar. 2018*

School of Management, Fudan University   Shanghai, China
Bachelor of Science / Master of Science in Statistics   *Aug. 2007 – July. 2013*

ACADEMIC PUBLICATIONS

- **Liu, Y.** and Arias-Castro, E. "A multiscale scan statistic for adaptive submatrix localization" ACM SIGKDD Conference on Knowledge Discovery and Data Mining, Anchorage AK, 2019.
- **Liu, Y.** and Guo J. "Distribution-Free, Size Adaptive Submatrix Detection with Acceleration" ALEA, Latin American journal of probability and mathematical statistics 17 (2020), 309-327.
- E. Laftchiev and **Liu, Y.** "Finding Multidimensional Patterns in Multidimensional Time Series" SIGKDD Workshop on Mining and Learning From Time Series, London UK, 2018.
- Arias-Castro, E. and **Liu, Y.** "Distribution-free Detection of a Submatrix" Journal of Multivariate Analysis 156 (2017): 29-38.

SKILLS

- **Programming Languages**: R, SQL, Python
- **Languages**: Chinese(native), English(fluent), Japanese(Basic)