

# Kenneth Hung

http://kenhung.me

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## EDUCATION

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### University of California, Berkeley

*Ph.D. in Mathematics; GPA: 3.9/4.0*

Berkeley, CA

*Aug. 2014 – May 2019*

### California Institute of Technology

*B.S. with Honors in Mathematics and Computer Science (minor); GPA: 4.0/4.0*

Pasadena, CA

*Sept. 2010 – May 2014*

## WORK EXPERIENCE

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### Meta Platforms Inc.

*Research Scientist, Core Data Science*

San Francisco, CA

*Jul. 2019 – Present*

- **Meta-analysis of experimental data:** Improved experimentation efficiency and quality through empirical Bayesian methods
- **Causal inference:** Semiparametric-efficient estimation in experiments, treatment effect estimation in experiments with spillover

### Citadel LLC

*Quantitative Researcher Intern*

Chicago, IL

*May 2017 – Aug. 2017*

- **Market making team:** Two projects on high frequency trading stock price predictive models
- **Model selection:** Investigated new high-dimensional feature selection in linear models for best model and best model path

### Facebook Inc.

*Software Engineer Intern*

Menlo Park, CA

*Jun. 2012 – Sept. 2012*

- **Pages team:** Implemented UI elements for page admins and crowd-sourced information using XHP

## SELECTED PUBLICATION AND PREPRINTS

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### Statistical methods for replicability assessment

*Kenneth Hung and William Fithian, Annals of Applied Statistics*

*2020*

- **Meta-analysis:** Analyzed dataset from experimental psychology replications to quantitatively answer previously vague questions about replicability in the scientific domain
- **Multiple testing and post-selection inference:** Developed new tests and new metrics for replicability analysis
- **Simulations and recommendations:** Simulations and data visualizations in support of better future scientific practices

### Rank verification for exponential families

*Kenneth Hung and William Fithian, Annals of Statistics*

*2019*

- **Multiple comparison with sample best:** Devised a more powerful approach to this classical problem that handles sparse large parameters without sacrificing power in the dense case
- **Simulations:** Demonstrated gains in power using Matlab, Python and R

## SKILLS

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**Languages:** C/C++, Mathematica, Matlab, Python, R

**Technologies:** git, L<sup>A</sup>T<sub>E</sub>X

## PROFESSIONAL ACTIVITIES

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### Causal inference reading group

*University of California, Berkeley*

*Aug. 2016 – May 2019*

- **Topics:** Philosophy, randomized experiment, observational studies, matching, propensity score, DAGs, instrumental variable, sensitivity analysis, regression discontinuity

## HONORS AND AWARDS

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### Scott Russell Johnson Undergraduate Prize, California Institute of Technology

*Awarded to the best graduating mathematics major*

*2014*

### International Mathematical Olympiad

*Represented Hong Kong; Bronze and Silver*

*2009, 2010*