Kenneth Hung

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Education

University of California, Berkeley — Berkeley, CA
Ph.D. in Mathematics; GPA: 3.9/4.0 — *Aug. 2014 – May 2019*

California Institute of Technology — Pasadena, CA
B.S. with Honors in Mathematics and Computer Science (minor); GPA: 4.0/4.0 — *Sept. 2010 – May 2014*

Work Experience

Meta Platforms Inc. — San Francisco, CA
Research Scientist, Central Applied Science — *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, treatment effect adjustment for imperfect experiment

Citadel LLC — Chicago, IL
Quantitative Researcher Intern — *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

Selected Publication and Preprints

Empirical Bayes selection for value maximization
Dominic Coey and Kenneth Hung, ACM Knowledge Discovery & Data Mining — *2025*

- **Regret bound**: Proof of a regret bound when solving a choose-m-out-of-n-items problem using an empirical Bayes approach
- **Semi-synthetic simulations**: Simulation based on publicly available datasets to illustrate the regret in a parametric case, achieving the proved regret bound under correct specification

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

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

Technologies: git, LaTeX

Honors and Awards

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*