

# NICHOLAS ROSS, Ph.D.

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## EDUCATION

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**University of California, Los Angeles**

2007 - 2012

*Ph.D., Anderson School of Business*

*Los Angeles, CA*

- Dissertation, *Three Essays in Accounting*, completed under Professors Richard Saouma (chair), David Aboody, Simon Board, Bruce Carlin and Jack Hughes.

**University of California, Davis**

2006 - 2007

*M.A. in Economics*

*Davis, CA*

**University of California, Berkeley**

1998 - 2002

*B.A. in Applied Mathematics, Honors*

*Berkeley, CA*

## WORK EXPERIENCE

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**The Meta**

June 2021 - Present

*Director of Data Science and Backend Engineering*

*San Francisco, CA*

- Built team and architected backend from the ground up on GCP (Docker, Node, Python, Kubernetes, PostgreSQL and Redis). Backend services included authentication, leaderboards and content management systems for video game training software serving thousands of concurrent users.
- Hired, negotiated contracts and oversaw development of engineering team. Managed budget for cloud based computing resources.
- Rearchitected backend system, moving from costly and limited serverless architecture to traditional kubernetes-microservice based system. Less than 10 hours of cumulative downtime per year.
- Designed load-testing frameworks, testing strategies, documentation systems and customer service tools.
- Oversaw a zero-downtime transition from a paid application to a limited time free to play application.
- Negotiated and oversaw external contractors to build a complementary web platform.

**University of San Francisco**

January 2014 - May 2021

*Associate Professor of Data Science, Director of Practicum & Asst. Director of External Partnerships at The Data Institute*

*San Francisco, CA*

- As Associate Director of External Partnerships, oversaw the entire funnel of USF's Data Institute's external relationships from sourcing hundreds of companies to managing paid partnerships. In two years went from zero paid partnerships to over thirty paid relationships worth over \$200,000 per year.
- Identified and created programs of interest to external companies, including a menu of professional certificate programs. Built curriculum at both the undergraduate and masters level to increase industry engagement. This included a wide variety of touch points for industry (guest-lectures, advisory boards and panels, mentorship, etc.) as well as elements for increasing student job market success (identifying positive curricular changes).
- Sourced internships for over 80 Masters of Data Science Students each year as Practicum Director.
- Developed curriculum for the following courses in the Masters of Data Science program: *Relational Databases*, *Big Data Business Strategies*, *Business Communications*, *Product Analytics* as well as a free-standing certificates in *SQL* and *Data Science for Product Managers*.
- Led development (three professors, three alumni and four current students) of election night early reporting platform for ABC News. Successfully called dozens of house races during the 2018 and the 2020 election cycles.

**Third Fin Consulting, LLC***President & CEO*

Oct 2015 - Present

*San Francisco, CA*

- Analytics and Data Science consulting service focused on helping businesses make data-driven decisions and build data science teams.
- Example engagements include product pricing, build vs. buy decisions, estimation of customer LTV and its use in marketing as well as hiring, organization planning and role definitions.

**Sega***Director of Analytics*

February 2014 - August 2015

*San Francisco, CA*

- Designed, built and implemented the analytics and reporting infrastructure at Sega Networks, which ingests over 250 million events daily and is queried by employees across the Sega family.
- Collaborated with product teams to design and interpret A/B tests.
- Created instrumentation guidelines and standardized reporting systems across Sega's games and studios globally.
- Worked closely with the marketing team to create an automated system for estimating customer long term value.

**TinyCo***Director of Analytics and User Acquisition*

October 2011 - January 2014

*San Francisco, CA*

- Led TinyCo's user acquisition efforts and growth strategy, focusing on data-driven ROI based decisions.
- Managed a \$25 million marketing budget to grow TinyCo's user base from 30 to 80 million users.
- Represented TinyCo in numerous industry-related conferences and acted as the primary contact for all growth initiatives.
- Oversaw TinyCo's analytics infrastructure, including working with engineering teams to design and implement load-testing frameworks and optimize production systems for scalability.
- Directed a team of data scientists to research and optimize cross-game issues, such as in-game economics, user acquisition, user LTV and the efficacy of cross-promotion initiatives.

**Bates White Economic Consulting***Senior Consultant*

February 2003 - August 2006

*Washington, DC & San Diego, CA*

- Managed teams conducting statistical research and analysis projects, including data imputation, validation and estimation.
- Performed analysis and drafted expert witness reports for national antitrust and insurance litigation.
- Improved and maintained epidemiological models of asbestos exposure and disease incidence in the United States.
- Supported clients and experts in insurance coverage negotiations and product liability litigation.

**National Science Foundation Grant Recipient***Undergraduate Researcher*

Summer 1999

*Piscataway, NJ*

- Received NSF grant to study mathematical optimization problems at DIMACS, the Center for Discrete Mathematics and Theoretical Computer Science at Rutgers University

**TALKS AND CONFERENCES**

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- 2011 American Accounting Association Doctoral Consortium attendee
- 2012 Open Mobile Summit: *Real Revenues from Real Time Bidding*
- 2013 Game Developer's Conference (GDC): *How to Lie with Analytics*
- 2013 Game Connection America Panel: *Mobile User Acquisition: Then, Now and Later*

- 2013 Casual Connect Conference: *The Evolution of TinyCo's Business Intelligence System*
- 2013 Nerd Nite: *Debits and Credits and Fraud, Oh My!*
- 2014 Game Analytics and Business Intelligence Forum: *Pre-production Game Analytics*
- 2015 Game Industry Analytics Forum: *Principles of Funnel Analysis*
- 2015 Gaming Analytics Innovation Summit: *Principles of Funnel Analysis*
- 2015 AICPA Forensic and Valuation Services Conference Speaker: *Big Data Analysis*
- 2016 AIIDE Player Analytics Workshop: *The Sensitivity of Retention to In-Game Advertisements: An Exploratory Analysis*
- 2017 SF Beer Week + USF's Data Institute at Standard Deviant Brewing (MC)
- 2017 Canadian Statistical Society Annual Meeting, Business Problems, Data Science Solutions Session: *Real World Hypothesis Testing*
- 2017 USF Data Institute Conference: *Practical Testing* and Panel Moderator: *The state of Data Science in Industry*
- 2018 SF Beer Week + USF's Data Institute and Fort Point Brewing (MC & Speaker)
- 2018 Mobile Growth Summit: *Mastering the Mobile Lifecycle* (Panelist)
- 2018 SERVIR Geospatial Information Technology Exchange: *Data and Geospatial Systems in the "Real-World"*
- 2018 Hackathon Host: French Consulate data education challenge
- 2018 101 Howard Admitted Students Day (SOM & CAS): *Introduction*
- 2018 MSDS Practicum Mentor Appreciation Event (MC)
- 2019 IEEE CCNC Session Chair: *Mobile and wearable devices, services and applications*
- 2019 SF Beer Week + USF's Data Institute at Original Pattern Brewing (MC & Speaker)
- 2019 Orange Silicon Valley Executive Summit: *Transformation: Some Lessons*
- 2020 SF Beer Week + USF's Data Institute at Standard Deviant Brewing (MC)
- 2020 USF's Data Science Seminar: *You are probably doing A/B testing incorrectly* with Nathaniel Stevens
- 2021 Game Analytics Workshop Keynote (in conjunction with Foundations of Digital Games 2021): *A/B Testing Incorrectly*
- 2021 Michigan State MSBA Seminar: *A/B Testing Incorrectly + 5 Job Market Facts*
- 2021 USF's Data Science Seminar: *A/B Testing Incorrectly*

## PUBLICATIONS

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- *A Theory of Participative Budgeting* (With Mirko Heinle and Richard Saouma) The Accounting Review, May 2014.
- *The sensitivity of Retention to In-Game Advertisements: An Exploratory Analysis* (With Zachary Burns and Isaac Roseboom) AIIDE Technical Reports, 2016.
- *Stylized Facts for Mobile Game Analytics* (With Anders Drachen, Julian Runge and Rafet Sifa) Proceedings of the IEEE Computational Intelligence in Games (CIG), 2016.

- *Customer Retention in Freemium Applications* Journal of Marketing Analytics, December 2018.
- *Topic Modeling to Extract Information from Nutraceutical Product Reviews* (with Deena John, Ernest Kim, Kunal Kotian, Ker Yu Ong, Tyler White, Luba Gloukhova and Diane Woodbridge) Proceedings of IEEE CCNC, 2019.
- *A Scalable Automated Diagnostic Feature Extraction System for EEGs* (with Abbie Popa, Prakhar Agrawal, Divya Bhargavi, Gokul Krishna G, Xiao Han, Neha Tevathia, Diane Myung-Kyung Woodbridge, Barbie Zimmerman-Bier and William Bosl) Proceedings of IEEE COMPSAC, 2019.
- *Controversy Score Calculation for News Articles* (with Paul Kim, Ziyu Fan, Lance Fernando, Jacques Sham, Crystal Sun, Yixin Sun, Brian Wright, Xi Yang and Diane Myung-kyung Woodbridge) Proceedings of the TransAI Conference, 2019.

## WORKING PAPERS

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- *Does an Executive's Ability to Profit from Insider Trading Translate into Superior Firm Performance?* (With David Aboody, John Hughes, and Ruihao Ke)
- *Strategic Intervention*
- *On the Bias of Treatment Effects in A/B tests* (With Nathaniel Stevens)

## SERVICE

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2019: Authored USF's Policy on STEM certification for graduate programs

2019: Reviewer, *The Journal of Marketing Analytics*

2019: USF Hiring Committee: Assistant Director for the Data Institute

2019: Reviewer, *The American Statistician*

2019: Undergraduate Independent study (two student groups, four students each)

2018 - 2020: Strategic Enrollment Management Committee

2015 - 2020: USF MSDS Technology Survey

2018, 2019, 2020: Math and Stats Colloquium: You and Your Tech Job Search

2017 - 2019: USF MSDS Student Interviews (60, 30, 40)

2017: Data Engineering Program Exploratory Committee

2014 - 2019: USF MSAN/MSDS Graduate School Open House

2016 - 2017: SOM Undergraduate Program Committee

2015 - 2017: SOM McLaren FARE student Advising / Advise-a-thon

2016: USF Hiring Committee: Digital Marketing Manager

2016: USF Major / Minor Fair

2016: SOM admitted students phone calls

2016: Data Institute Open House

2017 - 2020: Data Institute Board Meeting

2015: Accounting Meet the Firms Event

2021: Advisory Board, *Michigan Status University*, MSBA Program

## TEACHING

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Product Analytics: 2019-2021

Big Data Business Strategy: 2014 - 2018

Relational Databases: 2014 - 2020

SQL Certificate: 2017 - 2020

Data Science for Product Managers Certificate: 2018, 2020

Business Communications: 2015 - 2017

Managerial Accounting: 2014 - 2017