

369 Clinton Street
Brooklyn, New York 11231

JOHN AYER ROBERTS

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WORK EXPERIENCE

HAWKFISH, LLC

Senior Data Scientist

New York, NY

January 2020 - Present

- Worked across the tech org as part of the Experiments, Research and Design, Machine Learning Infrastructure, and Media Measurement teams building tools to optimize voter engagement and persuasion for the Mike Bloomberg 2020 campaign and various democratic clients in the lead up to the 2020 presidential election and Georgia senate runoffs.
- **Voter Modeling:** Built and deployed HF's voter registration model incorporating over 1,000 distinct voter features and scoring 257 million eligible voters to identify those most likely to have to register before the election. Scores from the model were used by registration efforts that registered more voters in key swing states than were the margins of victory in those states.
- **Causal Inference:** Developed various tools to establish the impact of digital ad content on voter behavior and opinions both within and outside of randomized controlled trial settings. Led the team to productionize Conditional Average Treatment Effect (CATE) modeling to identify the groups most strongly persuaded by specific ad content.
- **Machine Learning Infrastructure:** Worked directly with the ML Infrastructure team (occasionally as a team member and generally as an alpha tester) on their build out of HF's Kubeflow-based Machine Learning platform that incorporates Katib for parallelized hyperparameter tuning, Argo for scoring, and a custom built framework for model evaluation and interpretation.

BOXED.COM

Senior Data Scientist

Data Scientist

New York, NY

2019 - 2020

2017 - 2019

- Member of three-person data science team that worked collaboratively with c-level, engineering, marketing, operations, and product departments to define and deliver data products with an outsized impact on the business.
- **Predictive Modeling:** Developed a suite of customer quality models including stochastic (BG/NBD, Gamma-Gamma) and machine learning (XGBoost) lifetime value and churn models for identifying the company's best customers and those at risk of churning.
- **Experimentation:** Reviewed company methods and industry best practices (esp. the work of Ron Kohavi), built out Bayesian hypothesis testing app to provide robust and intuitive experimental results.
- **Data Pipelines:** Transformed event data into user-aggregated feature tables, backfilled historically and updated nightly for use in model building and fast, easy, and reliable querying; checked-in and peer-reviewed as authoritative source of truth.

OCTOPOD ANALYTICS

Founder and Lead Data Scientist

Brooklyn, NY

2016 - 2017

- Data science consultancy building data products for clients in the real estate, private equity, and venture capital industries.
- Services covered building data pipelines and databases, predictive models and analyses, visualizations and web apps.

ESSEX MANAGEMENT

Managing Director

Vice President

New York, NY

2009 - 2016

2007 - 2009

- Utility role in venture firm that founds or takes controlling seed positions in cleantech, biotech, and consumer goods technologies. Sat on portfolio company boards and assisted in raising over \$70mm and increasing portfolio valuation by 180%.

EDUCATION

BROWN UNIVERSITY

Master of Science in Applied Mathematics

Providence, RI

2005 - 2007

- Courses in functional analysis, probability theory, mathematical statistics, PDE, fluid dynamics, and linear programming. 3.8 GPA

COLUMBIA UNIVERSITY

Post-baccalaureate in Quantitative Studies for Finance

New York, NY

2003 - 2005

- Courses in probability, statistics, linear algebra, stochastic modeling, comp sci, multivariable calc, analysis, ODE, and PDE. 3.8 GPA

HARVARD UNIVERSITY

Bachelor of Arts in Psychology

Cambridge, MA

1998 - 2002

- Focus on cognitive neuroscience, social and evolutionary psychology, creative writing. Varsity cross-country and track and field.

PERSONAL & OTHER ACTIVITIES

NEW YORK ROAD RUNNERS

Board Member, Chair of Development Committee, Vice Chair of Public Affairs Committee

New York, NY

2015 - Present

CENTRAL PARK TRACK CLUB - NEW BALANCE

Board Member (Chairman and President, 2008-2017)

New York, NY

2008 - Present

- Increased revenue by 7x. Won 8 USA Track & Field National Championships. Sent 4 athletes to the London Olympics and 3 to Rio.

Sponsored Athlete

2006 - 2012

- 46th overall finisher (9th American, 1st Brooklyn resident) in the 2011 New York City Marathon in 2:29:46 (5:42 per mile pace).