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## – TAI CAI, PHD –

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### SUMMARY

<b>Profile</b>	· Quantitative scientist working at the intersection of applied statistics, machine learning, research science, software engineering, and product management
<b>Areas of Expertise</b>	· Bayesian statistics (causal inference, hierarchical models, model selection, nonparametric methods) · Classical statistics (statistical learning, experimental design, mixed models, time series) · Machine learning (tree-based models, deep learning, theory) · Cross-functional collaboration to productionize data-driven products
<b>Toolkit</b>	· Python, SQL, R, jupyter, Vim

### EXPERIENCE

<b>Research Data Scientist</b> , Quantitative Engineering	<b>Meta</b> , New York, NY 02/2021–Present
· Collaborate (with engineering, product, design, and UX research) as the core scientific point of contact in a 100 person team to build, improve, and migrate users to internal infrastructure tools used by engineers and scientists at Meta · Serve as the technical lead for members of the data team through mentorship, planning, production modeling, dashboards, ad hoc analyses, and stakeholder management · Conceptualize solutions to ambiguous problems using analytics, statistical and causal methods, and machine learning models	
<b>Applied Scientist</b> , Global Intelligence	<b>Uber</b> , San Francisco, CA 01/2020–02/2021
· Estimated point and interval values of competitive intelligence metrics used in executive decision-making · Engineered an ensemble of machine learning models using internal and third-party data to identify rare user groups for multi-million dollar experiments; improved legacy model performance by a factor of 2 · Identified and corrected multiple errors and inefficiencies found in the team repository, ranging from production code to deliverables used by stakeholders	
<b>Senior Data Scientist</b> , Data and Research	<b>BitSight</b> , Boston, MA 10/2017–01/2020
· Led all data science projects for third-party cybersecurity risk management, including BitSight's first machine learning based product, multiple analytical tools, and observational studies to evaluate internal processes · Supervised Master's-level intern working on 1) validation of external financial data and 2) sales/marketing analytics · Organized reading groups covering advanced topics in forecasting, prediction intervals, and model evaluation	
<b>Technical Advisor</b> , Data Science Fellow	<b>Insight Data Science</b> , Boston, MA 05/2017–09/2019
· As Technical Advisor: mentored data science projects for PhD graduates and postdoctoral fellows by providing weekly 1-on-1 feedback on project ideation/viability, data considerations, modeling techniques, and communication skills · As Data Science Fellow: consolidated and cleaned multiple data sources to tally millions of labeled data points to predict and visualize real-time supply and demand at 200 bike-sharing stations	

### EDUCATION

<b>PhD, Biostatistics</b>	<b>Harvard University</b> , Cambridge, MA 08/2012–09/2017
· Conducted and published statistical research on applied problems in genetics, health care policy, and end-of-life care · Developed novel methods and R code for handling confounding, sampling bias, misclassified outcomes, correlated outcomes, intractable cross-validation, and hierarchical structures · Taught graduate-level classes in Bayesian statistics, statistical methods, and introductory statistics/epidemiology	
<b>BMath, Statistics and Actuarial Science</b>	<b>University of Waterloo</b> , Waterloo, ON, Canada 09/2007–06/2012
· René Descartes National Scholar; Graduated with Distinction - Dean's Honours List (Highest Honours) · Completed six work semesters at Logitech, Hewitt Associates (now Blackstone), Manulife Financial, and Munich Re	