

Sean Chang

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| CONTACT INFORMATION | <i>Email:</i> seanchang.stat@gmail.com | <i>Citizenship:</i> U.S.A. |
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| EXPERTISE | Machine Learning, Statistics, Data Mining, Experimental Design, Probabilistic Modeling Python (PySpark, sklearn, debugger), C++, R (Rcpp, Armadillo, ggplot2, devtools) Spark, Hive, SQL, TensorFlow, Git, FBLearner, CSS, JavaScript, L ^A T _E X, Linux. | |
| WORK EXPERIENCE | <p><i>Senior Data Scientist, Sailthru, New York, NY</i> Mar 2016 -</p> <ul style="list-style-type: none"> Contributed production codes to Sailthru's machine learning platform, which predicts annual revenue, pageview count, purchase and optout probabilities at the user level. Optimized a novel recommender engine offering personalized contents for e-commerce and media clients; refactoring R codebase with Spark and Spark Streaming to improve efficiency. Automated analytics reports and pipeline; built dashboards to track predictions performance. <p><i>Co-founder, Tiba Health, LLC, Durham, NC</i> 2015 - 2016</p> <ul style="list-style-type: none"> Co-founded Tiba, an award-winning Health 2.0 startup focusing on physical rehabilitation compliance. Developed a real-time system provides correctness of rehab movements based on wearable sensor data. <p><i>Data Science Intern, Facebook, Menlo Park, CA</i> Jun-Aug 2015</p> <ul style="list-style-type: none"> Adopted Facebook's SVD-based recommendation system to Instagram likes graph. Provided product insights through analysis of A/B tests of cluster browsing and blended search. Conducted cohort studies and competitive analysis to evaluate the performance & impacts of video filters. <p><i>Risk Management Summer Associate, Goldman Sachs, London, UK</i> Jul-Sept 2014</p> <ul style="list-style-type: none"> Developed and implemented new methods for modeling cross currency swap basis using currency forward. This work is now utilized for daily risk management in Goldman Sachs. Collaborated with engineers and analysts in Bangalore and Singapore to deploy code into production. <p><i>Analytics Summer Researcher, Verisk Analytics, San Francisco, CA</i> May-Jul 2014</p> <ul style="list-style-type: none"> Proposed and implemented a health care fraud detection algorithm based on reclassifying insurance providers' specialities using random forest. The algorithm improved the existing one by 10%. Visualized data and results with the data-driven JavaScript library <i>D3.js</i> and <i>impress.js</i> <p><i>Instructor in Mathematics Department, Duke University, Durham, NC</i> Fall 2012</p> <ul style="list-style-type: none"> Taught Single Variable Calculus and managed the work of TAs, received 4.0/5.0 course evaluations. | |
| RESEARCH AND PUBLICATIONS | <ul style="list-style-type: none"> <i>Bayesian statistics:</i> Investigated asymptotic behaviors of Bayesian and frequentist procedures in the scenario of high dimensional multivariate normal distribution with arbitrary covariance dependence. <p>(With J. Berger) "Comparison of Bayesian and frequentist multiplicity correction for testing mutually exclusive hypotheses under data dependence".</p> <p>(With J. Berger) "Frequentist multiplicity control of Bayesian model selection with spike-and-slab priors".</p> <ul style="list-style-type: none"> <i>Clinical trials:</i> Examined efficacy of HIV vaccines with Bayesian sequential tests. <p>(With J. Berger) "Bayesian multiple testing in sequential clinical trials". final revision</p> <p>(With A. Brouwer, et al.) "Burden of Chlamydia in the United States: Trend Analysis of Incidence Rates" Nineteenth Mathematical and Statistical Modeling Final Report, p.77-109. 2013.</p> | |
| AWARDS AND HONORS | <p><i>First Place Prize, NC Data Jam, Raleigh, NC</i> Sept 2016</p> <p><i>Duke Startup Challenge Finalist</i> July 2016</p> <p><i>The Grand Prize & Validic mHealth Prize, Triangle Health Innovation Challenge</i> Sept 2015</p> <p><i>National Collegiate Table Tennis Men's Consolation Singles, Quarter finals, Eau Claire, WI</i> Apr 2015</p> <p><i>Dean's Award, National Taiwan University (top 10% of class)</i> 2011</p> | |
| EXTRA- CURRICULAR ACTIVITIES | <p><i>Data Scientist Volunteer, Data Kind, New York, NY</i> 2016 -</p> <p><i>Webmaster, the Congregation at Duke Chapel, Durham, NC</i> 2016 -</p> <p><i>Member of International Society for Bayesian Analysis (ISBA)</i> 2013-2016</p> <p><i>Educational outreach, Brogden Middle School, Durham, NC</i> 2014-2016</p> <p><i>Varsity Table Tennis Team, National Taiwan University & Duke University</i> 2006-2015</p> | |