

Matthew Krachey, PhD

2301 Lake Stone Cove

Austin, TX, 78738

☎ (919) 673-0308

✉ matthewkrachey@yahoo.com

Personal Summary

Experienced Data Scientist and Statistician with expertise using data to drive business decisions.

Professional experience

- Oct-2019- **Staff Data Scientist**, *Vrbo- Part of Expedia Group*, Austin, TX.
Present Worked in Ranking and now part of NLP team. Developed several production ranking algorithms, worked with chat and customer service datasets
- May-2018- **Senior Data Scientist**, *Dosh*, Austin, TX.
Oct-2019 Machine learning and statistical consulting in marketing, measurement, risk, growth. Introduced H3 and Airflow as company technologies.
- Jan-2018- **Data Scientist 2: Testing Expert**, *HomeAway*, Austin, TX.
May-2018 Project consulting, tool development, global testing strategy around Bayesian Statistics. Introduced Bandit algorithms for testing optimization for particular teams.
- Jan 2017- Dec 2017 **Data Scientist 2**, *HomeAway*, Austin, TX.
Supported marketing, reputation, and testing. Primarily used R, Scala with Spark and H2o for data analysis, pipelines and machine learning.
- Feb 2015- Jan 2017 **Staff Data Scientist**, *MaxPoint Interactive*, RTP, NC and Austin, TX.
Worked in pricing, pacing and control space in online advertising on multiple petabyte data stack. R, Python, Scala, PostgreSQL, Impala, Spark
- Jan 2014 -Feb 2015 **Principal Statistician**, *GlaxoSmithKline*, RTP, NC.
Provided support for late phase oncology projects. Member of Assurance Consulting team, and worked on one of first assurance calculations at GSK. Providing additional consulting in statistical graphics, Bayesian clinical trial design, and grid computing.
- April 2013- Jan 2014 **Data Scientist**, *Tiger Analytics*, Raleigh, NC.
Provided programming and modeling support for consulting projects in advertising domain; Helping to develop core business in pharmaceutical and genomics research; Programming languages/ technologies used: R, Python, HP Vertica, AWS
- Oct 2009-Nov 2012 **Postdoctoral Researcher**, *Department of Biology, NC State University*, Raleigh, NC.
Researched relationships between bird distributions, habitat and climate change; Provided statistical consulting for 12 graduate students as well as their faculty advisors.

Education

- Aug 2009 **Doctor of Philosophy**, *Biology with a co-major in Biomathematics*, NC State University, Dissertation Title: “Hierarchical Bayesian Tag-Return Models”.
- Aug 2006 **Masters of Science**, *Statistics*, NC State University.
- May 1999 **Bachelor of Arts**, *Creative Studies, Biology Emphasis*, UC Santa Barbara.

Honors

- 2018 **Culture Super Star Award: Mastery**, *HomeAway*.
2014 **Exceptional Scientist Award**, *GlaxoSmithKline*.
2008-2009 **Preparing the Professoriate Fellow**, *NC State University*.
2005-2007 **NOAA Fisheries Population Dynamics Fellowship**, *NC State University*,
NOAA Miami and NOAA Woods Hole.

Outreach

Committees

Member of the American Statistical Association Committee on Career Development (Current Chair): 2017-Present

Presentations

"Hierarchical Tag-Return Models with Changepoints" American Fisheries Society Annual Meeting, Ottawa, ON, August 19, 2008

"Hierarchical Tag-Return Models" American Fisheries Society Annual Meeting, San Francisco, September 3, 2007

Statistical Experience

Modeling Experience GLM, ANOVA, Hierarchical Bayesian models, Survival modeling, Spatial Statistics, Time Series Analysis including Dynamic Linear Models, PID Controllers, Clustering, Test Analysis

Statistical Computing Modeling with R, Python, Julia; Manual creation of complex MCMC using Metropolis-Hastings and Gibbs Sampling algorithms in R, and Python; Spark for processing big data

Programming

Expert Experience R, SQL, Python

Intermediate Experience Scala, Julia, \LaTeX , Spark, Stan, BUGS

Select Publications

- Collazo, J.A., **Krachey, M.J.**, Pollock, K.H., Pérez-Aguilo, F.J., Zegarra, J.P., Mignucci-Giannoni, A.A. 2019 Population estimates of Antillean manatees in Puerto Rico: an analytical framework for aerial surveys using multi-pass removal sampling, *Journal of Mammalogy* 100(4) 1340–1349.
- Porter, K.M., DePerno, C., Krings, A., **Krachey, M.J.**, and Braham, R.R. 2014 Vegetative Impact of Feral Horses, Feral Pigs, and White-tailed Deer on the Currituck National Wildlife Refuge, North Carolina, *Castanea* 79(1) 8-17.
- Boone, E.L., Merrick, J.R.W, **Krachey, M.J.** 2014.A Hellinger distance approach to MCMC diagnostics. *The Journal of Statistical Computation and Simulation* 84(4), 833-849
- Blackman, E.B., Deperno, C.S., Heiniger, R.W., **Krachey, M.J.**, Moorman, C.E., Peterson, M.N. 2012. Effects of crop field characteristics on nocturnal winter use by American woodcock. *The Journal of Wildlife Management* 76(3) 528-533
- Hackett, S.C. , **Krachey, M.J.**, Brown, S., Hankin, D.G. 2005. Derby fisheries, individual quotas, and transition in the fish processing industry. *Marine Resource Economics*. 20(1) 47-60.
- Hackett, S. C., **Krachey, M. J.**, Dewees, C. M., Hankin, D. G., Sortais, K 2003. An economic overview of Dungeness crab (*Cancer magister*) processing in California. *California Cooperative Oceanic Fisheries Investigations Report*, 86-93.