Sean Martin

Oakland, California | sean.martin@nyu.edu | phasedchirp.github.io | 510-301-2920

Education:

PhD, Linguistics. New York University (September 2015)

Speech perception, quantitative methods, and using machine learning to understand cognitive processes.

BA, Linguistics. University of California, Los Angeles (May 2008)

Skills:

Applied Statistics and Machine learning, Bayesian methods, Experimental Design, Data Visualization. Programming experience in R, Python, SQL, Stan, Julia, SAS, Octave/Matlab.

Experience:

Kaiser Foundation Health Plan (May 2017-present)

Business Analyst: Data analysis and predictive analytics for large-scale healthcare data.

- Integrate predictive modeling tools production ETL processes using SAS/SQL to forecast usage and costs for millions of customers during expansion of Kaiser's data infrastructure.
- Build automated and interactive anomaly detection in SAS and R to monitor data source quality.
- Introduce version control and other development best practices into team workflows.
- Work to build shared resources and reduce duplication across several predictive modeling projects.

Consultant (September 2015 – May 2017)

Worked with clients to build automated, reproducible, and interpretable data analysis pipelines addressing academic and business needs from ingesting raw data to interpretable output. Projects included:

- Bayesian modeling of individual behavior and contextual variability to examine how speakers use socio-linguistic features to construct and present ethnic identity.
- Designed/prototyped/iterated to deployment a web service for reproducible analysis of SEO data for RankScience. Deployed in production using Amazon's Elastic Beanstalk platform.

Recurse Center (July 2016 – September 2016)

Self-directed continuing education in programming. Projects included:

- Prototype tools for real-time/streaming data analysis and machine learning in Haskell.
- Satirical random number generator using real-time Twitter data as an entropy source.

NYU Phonetics and Experimental Phonology (PEP) Lab (May 2011 – September 2015)

Lab Manager: Developed data collection and analysis pipelines, consulting for students and faculty.

- Re-built and streamlined tongue-shape analysis pipeline, reduced space for user error, and improved statistical graphics.
- Migrated lab processes to open-source tools freely available to students.

Research Assistant: Investigated phonetic and phonological factors in non-native speech perception. PIs Lisa Davidson and Colin Wilson, NSF Grant 1052784

Selected Publications:

- Holiday, Nicole and Sean Martin (2017) *Vowel categories and allophonic lowering among Bolivian Quechua–Spanish bilinguals* Journal of the International Phonetic Association, 1-24.
- Davidson, Lisa, Sean Martin, and Colin Wilson (2015) *Stabilizing the production of nonnative consonant clusters with acoustic variability.* Journal of the Acoustical Society of America, vol. 137 pp. 856-872
- Wilson, Colin, Lisa Davidson, and Sean Martin (2014) *Effects of acoustic-phonetic detail on cross-language speech production.* Journal of Memory and Language, vol. 77, pp. 1-24