Sean Martin

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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, SAS

Experience:

KAISER FOUNDATION HEALTH PLAN (Business Analyst Intermediate 5/17-4/19, Senior 4/19-present):

Data science and data engineering for large-scale healthcare data.

- Building interactive web-based tools using R, Shiny, and MS Synapse to enable self-service analytics for clinical staff seeking to evaluate program outcomes.
- Rebuilt and streamlined legacy data pipelines during large-scale expansion of data infrastructure to introduce consistent logic for claims data processing across all Kaiser regions.
- Integrated predictive modeling into data pipelines using SAS to forecast costs and service volumes for external claims.
- Built tools for interactive anomaly detection, visualization, and analysis in SAS and R.

CONSULTANT (September 2015 – May 2017):

Built automated reproduceable data analysis pipelines for academic and business clients. 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 reproduceable analysis of SEO data for RankScience on AWS.

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 (Lab Manager/RA May 2011 – September 2015):

- Developed data collection and analysis pipelines, consulting for students and faculty.
- Rebuilt tongue-shape analysis pipeline. Streamlined procedures and reduced space for user error.
- Migrated analysis pipelines to open source tools.
- Investigated phonetic and phonological factors in non-native speech perception, supervised undergraduate RAs. PIs Lisa Davidson and Colin Wilson, NSF Grant 1052784

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