

AARON MAURER

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115A Park St ◇ San Francisco, CA 94110

SUMMARY

I am an experienced machine learning data scientist and statistician on the search ranking team at Airbnb.

Specialties: Machine Learning; Production Data Pipelines; Online Experimentation; Nonparametric, Bayesian, and Classical Statistics; Large Scale Data Analysis.

TECHNICAL SKILLS

Programing Languages	Python, Scala, R, SQL (Hive/Presto/MySQL), Stata, SAS, Some Ruby
Programing Tools	Apache Spark, Airflow, AWS, MapReduce, Hadoop, Jupyter, Git, L ^A T _E X

PROFESSIONAL EXPERIENCE

Airbnb <i>Machine Learning Data Scientist, Search Ranking</i>	San Francisco, CA <i>August 2015 - Present</i>
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- Trained and implemented new versions of the GBM-based ranking algorithm. Contributed to 4.5% cumulative increase in bookings across ranking team.
 - ◇ Conceived, trained, and tested online a series of models with improved labeling of guest rejections. Experiment analysis and subsequent deep dives into model guided further development.
- Built and maintained Airflow/Hive/Scala/Spark data pipelines for online features and training data.
 - ◇ Built generalized anomaly detection framework into ETL processes which caught hundreds of feature issues and prevented search service degradation. Provided Slack alerting to identify issues.
- Oversaw search ranking experiments, guiding their design, methodology, and interpretation.
 - ◇ Implemented stratified estimators in company-wide, Ruby experimentation application and Hive data pipelines, reducing bias and cutting experimentation time by up to 20%.
 - ◇ Built Pyspark sequential testing pipeline to properly control false positive rate from experiments as actually run. Currently scaling process and evangelizing for broader use.
- Conducted ad hoc data analysis to understand current algorithm behavior and opportunities.
 - ◇ Performed retrospective of offline DCG metrics vs online performance, which pinpointed limits of our existing offline evaluation and sped up further model iteration.

Acumen, LLC <i>Policy Associate</i>	Burlingame, CA <i>August 2011 - August 2014</i>
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- Provided analytical and programing expertise to federal agencies studying healthcare topics, guiding \$25 billion in spending and monitoring safety of millions of vaccinations.
- Performed data analysis on and statistical modeling of entire enrolled Medicare population.
- Worked with federal clients to develop analysis and explicate results; produced data visualization and documentation to assist client understanding.

EDUCATION

Masters of Science in Statistics University of Chicago - Chicago, Illinois	<i>August 2015</i>
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Bachelor of Arts in Mathematics & History, Cum Laude Carleton College - Northfield, Minnesota	<i>June 2011</i>
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