AARON MAURER

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SUMMARY

Experienced technical and people leader of machine learning software teams seeking new challenge.

Specialties: Search and Recommendation Systems; Data Engineering and Production Data Pipelines; Identifying and Bootstrapping ML Use Cases; Statistics and Online Experimentation; Data Analysis

TECHNICAL SKILLS

Programing Languages	Python, Scala, Java, PHP/Hack, SQL (Hive/Presto/MySQL)
Programing Tools	Apache Spark, Airflow, AWS, Kubernetes, Jupyter, Git

PROFESSIONAL EXPERIENCE

Slack

Senior Software Engineer Manager — *February 2022 - Present*

- Lead 10 person infrastructure engineering organization of two teams
  - ◇ Machine Learning collaborates with product teams to incorporate ML/AI features.
  - ◇ Real Time Services manages services to stream messages to Slack clients
- Developed engineer on ML team as a manager and handed off direct management to her
- Managed transition from vendor to homegrown ML model serving service, saving $400k/yr

Software Engineer Manager — *May 2021 - February 2022*

- Manged Machine Learning team, developing team strategy and growing team from 1 to 5 engineers
- Worked with product leaders to identify impactful ML use cases around org and lead collaboration.
- Developed ML infra/tooling strategy to serve various product needs.
  - ◇ Guided development of our generic recommendation engine the Recommend API
  - ◇ Managed transition to kubernetes based model training infra, saving $500k/yr

Staff Software Engineer, Machine Learning — *February 2020 - April 2021*

- Technical Lead of the Machine Learning Team
- Leader in developing our embedding search service for users and channels, developing methodology and pipeline for both semantic and interaction based embeddings.
- Built out recommendation API on top of embedding service and on-boarded product teams

Senior Software Engineer, Machine Learning — *June 2017 - February 2020*

- Primarily focused on developing ranking models for message search, file search, and autocomplete
  - ◇ Built foundational data pipelines for training and developed search wide product metrics
  - ◇ Developed training methodology, including sampling, ranking objectives, position bias adjustments
- Built unified feature pipelines and collections to aggregate CTR/interaction stats for various entities
- Developed spam model to automate blocking Slack invite spam - see blog post.
- Built anomaly detection framework, catching numerous performance/logging regressions
- Developed logging and metrics to track time spent in Slack as part of drive towards public offering

Airbnb
Machine Learning Data Scientist, Search Ranking *August 2015 - June 2017*

- Trained and implemented new versions of the GBM-based ranking algorithm. Contributed to 4.5% cumulative increase in bookings across ranking team.
- Built and maintained Airflow/Hive/Scala/Spark data pipelines for online features and training data.
- Oversaw search ranking experiments, guiding their design, methodology, and interpretation. Developed stratified estimators and sequential testing methodologies.
- Conducted ad hoc data analysis to understand current algorithm behavior and opportunities, including retrospective of offline DCG metrics vs online performance.

Acumen, LLC Burlingame, CA
Policy Associate *August 2011 - August 2014*

- 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 *August 2015*
University of Chicago - Chicago, Illinois

Bachelor of Arts in Mathematics & History, Cum Laude *June 2011*
Carleton College - Northfield, Minnesota

PATENTS

- US-11297030-B2 - Embeddings-based discovery and exposure of communication platform features
- US-20220284030-A1 - Methods, Apparatuses and Computer Program Products for Outputting Improved Autosuggestions in a Group-Based Communication Platform
- US-11297030-B2 - Optimizing application performance with machine learning