Sam Kritchevsky

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Professional Summary

I am a software engineer and data scientist. I have 5 years of professional experience working at SeatGeek. where I served in various roles across the data organization and was the tech lead for a six-member Data Platform team for the last year of my tenure. I am most at home in the domain of data engineering, but I also have plenty experience with ML-eng, Data Science, Analytics, backend, and full-stack engineering; I like to describe as a "data generalist". I've primarily worked in Python and SQL, but also have some experience with Scala and Typescript.

Before my tech career I was enrolled in a Ph.D. program in physics, and I still maintain a hobbyist interest in physics, math and math education, and occasionally still write essays on these topics, which can be seen on my personal site.

Please note that I am currently re-entering the tech industry after a few years away. In the meantime I have been working on personal projects, writing on my Substack, traveling, taking piano lessons, and working as a private math and physics tutor.

Technical Skills

Languages	:	Python, SQL. Some Typescript, Javascript, Scala.
Tech	:	PostgreSQL, DBT, Spark, Flink, RabbitMQ, Elasticsearch, Redis, PostGIS, Pandas, Numpy, Tensorflow, Docker, Luigi, Dagster, Akka, React, Svelte, Docker, Nomad
Cloud Tech	:	Various AWS, incl. Redshift, Redshift Spectrum, Kinesis, Kinesis Firehose, S3, Lambda, EMR, Glue, IAM, RDS.
Roles	:	Data Engineering, Data Platform, Backend Engineering, ML Engineering, Data Science, Analytics

Experience

SeatGeek 2016-2021

Sr. Software Engineer, Data Platform 2020-21

Tech lead of the Data Platform team. Our projects included:

- A rewrite of our clickstream ingestion service, massively improving scalability and fault tolerance, particularly during spiky event on-sales, and enabling fanout to many downstream applications. Tech: Flink, Spark
- Established a standardized notebook stack for use by our data science teams, which allowed DS analysis work to be shared reproducibly across the team and to be incorporated into production data pipelines. Tech: Jupyter, Papermill
- Rolled out a centralized system data documentation, lineage, and discovery. Tech: Amundsen, Airflow, AWS Neptune.
- Owned and maintained the streaming data pipelines for ticket inventory, search, clickstream, and experimentation data. Tech: Spark, Akka Streaming, Python, AWS Kinesis.
- Owned and maintained the core analytics stack, which backed our BI layer and served data needs for many departments. Tech: Druzhba, DBT, Luigi, Redshift, Looker.

Senior Data Scientist 2019-20

Data Scientist 2017-19

I specialized on user preference signals, our live event catalog, and push marketing. Projects included:

- Recommendation algorithms for weekly newsletter and various cart abandonment and price-drop notifications, tripling the revenue attributed to email notifications. Tech: Spark on AWS EMR, SQL.
- Event and performer popularity models, feeding into event recommendations and searcc. Tech: Tensorflow, Keras, Numpy.
- Rewrite of entity-linking algorithm, which deduplicated users and device for marketing attribution and use in funnel KPIs. Tech: SQL, Luigi.
- Ongoing involvement in the design and measurement of metrics for recommendations, search, and push marketing.

Software Engineer, Discovery 2016-17

- Backend engineering and data analysis for frontpage recommendations, search, social features, and push marketing.
- I built a simple reverse-ETL system to push datasets from our Data Warehouse into production PostgreSQL and MySQL databases.

Other

Private Math Tutor, Club Z Tutoring 2024-2025

Volunteer Data Analyst, Greater Harlem Coalition 2022

Contributed data analysis, writing, editing, and website administration for a community advocacy group, using a data pipeline built with DBT, Python, Dagster, and PostGIS (code here.)

Physics Graduate Student and Teaching Assistant 2014-2016

My research interests involved theoretical statistical mechanics, complexity theory, and dynamical systems.

Education

University of Wisconsin Madison, WI

Physics Ph.D. Student 2013-2015

University of North Carolina Chapel Hill, NC

B.S. Physics, Math Minor 2012