

# GEORGE HAYWARD, Esq.

## Full-Stack Data Scientist

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## EXPERIENCE

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### Hayward Data Science

New York, NY

Data Expert for Startups & Small Businesses

2022 - present

- Coded & designed [Sound Recipe](#) app to [back up](#) Spotify playlists. Downloads span 10 countries and counting. Set up Google Cloud Functions, Firestore NoSQL databases, automatic BigQuery streams, & Looker dashboard.
- Extended predictive churn/conversion ML system for \$8.5 million-backed & acquired startup ([Reference Letter](#)).
- Training LLM (Google T5-small Transformer) mimicking dramatic news scraped from [Python ETL script](#).
- Engineered Python recommendation system for a \$1 million+ small business, improving its product suggestions.
- Selected as a Mentor on both Peak Mentors and SharpestMinds; commended for “transformational advice.”

### Meta, Messenger

New York, NY

Senior Data Scientist, Product Analytics

2019 - 2022

- Promoted to Senior Data Scientist in 1 year, demonstrating exceptional performance.
- Built first-of-its-kind in-production ML anomaly detection system, “*Battery Beloved*.” Led project in Meta’s Machine Learning Accelerator, automatically debugging battery drain. Saved 100’s of engineer hrs. Published, “*Step-By-Step Guide to In-Production Machine Learning Model: Battery Beloved, as example (w/ XGBoost)*.”
- Published “*Automate a Python Script at Facebook*.” Praised as: “a foundation for \*\*all Python engineers at Meta.\*\*” Added to “Python @ FB” training docs. Inspired Meta-wide solution, “*Bento Scheduled Notebooks*.”
- Devised and deployed new disk pressure metric, *Weeks Till Full* (“*WTF*”) for over 2 billion users (Instagram, Messenger, & Facebook App). Developed Orange/Yellow/Red zones for disk pressure in end-to-end message encryption. Named data science lead for cross-functional team & the product manager’s “go-to” data scientist.
- Designed first-of-its-kind Performance, Reliability, and Efficiency Quality user survey to connect perception to ‘under-the-hood’ app metrics, led power analysis, control flow, language editing, and won initial approval.
- Led development, testing, & operationalization of new topline battery efficiency metric for 1.2 billion Android users tied directly to user experience via session-retention analysis. Developed Red/Yellow/Green drain levels.
- Led text-based NLP analysis of 1- & 2-star Messenger reviews in Apple’s App Store & Google’s Play Store.
- Unblocked an entire engineering team by sizing (95% Confidence Interval; statistical analysis in R) the impact of an imbalance on a key metric in the A/B test. This enabled the team to ship the product to 165 million users.

### Google, Area120, Tailor (Fashion Tech Startup)

San Francisco, CA

Data Scientist (contract)

2018 - 2019

- Built team’s first predictive model for customer lifetime value. Analyzed 200,000+ users via log. regressions & lin. optimizations in R & Google’s Learn. Powerhouse; automated GoogleSQL scripts to report & dashboard it.
- Automated hourly order priority score ranking orders on revenue, user status, and time since placement.
- Instituted daily email e-commerce report updating team on purchase metrics and initiated tracking dashboard.
- Ran user first-purchase analysis finding that 80% of users, if they purchased, did so in their first 4 days in app.

### Morgan Stanley

New York, NY

Investment Banking Analyst, Public Finance

2011 - 2013

- Created interest rate databases so team could access data with SQL queries instead of less-efficient Vlookups.
- Provided quantitative analysis and execution support on the following debt issuances and restructurings:
  - \$1.32 billion, NJ Trans. Trust Fund Auth. (2011); \$847 million, IL Met. Pier & Expo Auth. (2012).
- Executed credit and interest rate analysis and quantitative support on the following corporate debt issuances:
  - \$94 million, US Steel Corp. (2012); \$250 million, Alcoa Inc. (2012); \$224 million, Con Edison (2012).

## SKILLS

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SQL ([ranked #1](#)), Python, R, Swift, ML, XGBoost, ETL, AWS, Looker, Git, Google Cloud, A/B Tests, Automation, Excel.

## EDUCATION

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Stanford University, JD/MBA, *Stanford Law Review*, *Admitted to CA State Bar and NY State Bar*

2014 - 2018

Harvard College, B.A. in Government, *Black Students Association Political Action Chair*

2007 - 2011