

# GEORGE HAYWARD

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## SUMMARY

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Senior data scientist & iOS developer focused on business analytics. 8 years of experience in Product & 2 in Finance.

## EXPERIENCE

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### Calm, Inc.

New York, NY

Senior Data Scientist, Subscription & Growth Analytics

2024 - present

- Own multi-million-dollar Customer Lifetime Value (LTV) model built with XGBoost, authoring 200-page documentation. Created Docker Compose repo for local model bootstrapping and experimentation, while maintaining in-prod versioning. Pinpointed LTV downturns with Shap values; provided tactical insights for the User Acquisition team to optimize ad spend, recovered an estimated 11% in projected revenue in key segment.
- Lead-authored & published flagship blog post — “[Bayesian Power Analysis at Calm with Google’s Causal Impact Library](#).” Demonstrated how a Bayesian structural time-series (difference-in-differences-style quasi-experiment) design and bootstrapped power simulations guide ad-spend tests on self-branded search keywords.
- Present weekly company-wide Direct-to-Consumer Metrics Review to the Chief Product Officer; partner with Lifecycle, Product, User Acquisition, and Finance teams to consolidate KPIs, investigate emerging trends, and answer executive questions on LTV/CAC efficiency, customer win-backs, new installs, and new purchases, ensuring clear visibility into full-funnel performance.
- Maintain user acquisition attribution pipeline. Oversee attribution logic and purchase-forecast models under Apple ATT; monitor data health, triage alerts, back-fill gaps, and clear ETL/test failures.
- Designed specialized A/A test for six-figure Google A/B test using XGBoost, R, and complex randomization techniques ensuring non-patterned zip code distribution across various economic, internal, and ads-based strata.
- Developed bespoke Mode dashboard with 20+ interactive visualizations to analyze subscriber win-backs, renewals, and new install trends, directly informing multi-million-dollar Black Friday marketing campaigns.
- Streamlined code quality by reviewing and merging dozens of ad attribution and customer lifecycle pull requests.

### Hayward Data Science

New York, NY

Data Expert for Startups & Small Businesses

2022 - present

- Built demographic regression model & web app for small business, optimizing lease choice ([Reference Letter](#)).
- Coded & designed [Sound Recipe](#) app to [back up](#) playlists. Downloads in 20 countries, 6 continents and counting. Set up Google Cloud Functions, Firestore NoSQL databases, automatic BigQuery streams, & Looker dashboard.
  - Implemented Generative AI techniques to create playlist summary images through deep learning models.
- Coded & designed [Setlist2Playlist](#) web app to [convert](#) concert setlists to playlists, in under 30 seconds, for free.
- Coded & designed daily [YouTube Tracking](#) data app for likes-to-views ratios on Top 10 videos in 20 countries.
- Extended predictive churn/conversion ML system for \$8.5 million-backed & acquired startup ([Reference Letter](#)).
- Mentored students and taught Python at North Star Academy (Newark, NJ), part of Uncommon Schools.
- Engineered Python recommendation system for \$1 million+ small business, creating its first product suggestions.

### 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. Reduced debugging time by 80%. Published “*Step-By-Step Guide to In-Production Machine Learning Model: Battery Beloved (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; led power analysis.
- Led text-based NLP analysis of 1- & 2-star Messenger reviews in Apple’s App Store & Google’s Play Store.
- Unblocked engineering team by sizing impact imbalance in A/B test; enabled shipment to 165 million users.

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## EXPERIENCE (CONTINUED)

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### 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.
- Ran credit and interest rate analysis on over \$3.5 billion of debt issuances and restructurings, including:
  - \$1.32 billion, NJ Trans. Trust Fund Auth. (2011); \$847 million, IL Met. Pier (2012); Con Edison (2012).

## SKILLS

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**Code:** SQL, Python, R, Swift, Bash, JS, Jinja, CSS, ML, XGBoost, Shap, ETL, Looker/Mode, Git, A/A+A/B Tests, cron.

**In Prod:** AWS, GCP, Databricks, Docker, Cloud Functions, Cloud Run, Airflow, dbt, Google Analytics, Streamlit, APIs.

**Functional:** Communication, Project Management, Mentoring, Biz-to-Eng Translation, Data Visualization, Unblocking.

## EDUCATION

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Stanford University, J.D./M.B.A., Law Review

Harvard College, B.A.,

Phillips Exeter Academy, Full Scholarship