

JULIANNA HARWOOD

Los Angeles, CA | 207-233-3240 | jgaharwood@gmail.com | <https://www.juliannaharwood.com>

Professional Experience

Data Scientist, Los Angeles Times, Los Angeles CA

July 2022 - Present

- Lead analysis of A/B test results for personalization systems and mobile app features. Write results memos, account for multiple testing adjustments, troubleshoot sample ratio mismatches and perform other validation checks on data to ensure results are reliable.
- Research and apply causal inference methods such as difference-in-difference and regression discontinuity to time series data from un-controlled feature launches to understand the causal relationships between features and KPIs such as homepage click through rate and pageviews per user.
- Spearheaded the refinement and expansion of the business's LTV prediction model by standardizing performance testing of the base Cox proportional hazards regression model and expanding use cases to achieve less than 5% error in predicting average annual LTV per subscriber. Re-architected pipeline and built RShiny app to make inference self-serve for product stakeholders.
- Implemented a platform that automates A/B test results visualization, audience segmentation and dimensional analysis to reduce data science work needed for each test from weeks to hours, doubling the number of A/B tests YoY.

Consultant, Accenture (advanced application engineering practice), Los Angeles CA

August 2019 – June 2022

- Co-authored [novel optimization model](#) to reduce transaction costs of financial portfolios.
- Achieved one of the first demonstrations of Amazon Braket, AWS's quantum computing service.
- Created and implemented a mixed integer model to optimize delivery truck routes using annealing algorithms.
- Performed grid search parameter tuning to achieve valid solutions for networks 10x larger than previously possible with our mixed integer models.
- Scripted automated tests with Pytest to evaluate performance of custom-made, BERT-based, conversational Q&A platform, hosted on AWS.
- Routinely summarized and communicated results of projects to product owner and lead developers to facilitate informed decision making around iterations and improvements.

Data Analyst, Cogo Labs, Cambridge MA

June – August 2018

- Analyzed web traffic data using SQL to develop plans for online happy-hour-finder that reached 11,000 visits in seven weeks.
- Designed and conducted AB tests to evaluate website features and ad strategies against KPIs such as daily unique visitors, bounce rates and cost per click of ads.
- Developed dashboards from SQL workflows to provide accessible and up to date visibility into KPIs.
- Won the company-wide hackathon by building a messaging bot using Python and SQL that alerts users to long running and long-standing SQL executions and deliveries to minimize company data storage costs.

Education

Wesleyan University, Middletown CT

May 2019

Bachelor of Arts in Physics and Economics, Minor in Data Analysis

- Graduated Phi Beta Kappa, Fall inductee (reserved for top 2% of graduating class)
- Awarded *Outstanding Contribution to Science Education*, May 2019: Given to a senior who has demonstrated exceptional skills as an undergraduate teaching assistant.
- Awarded *Johnston Prize*, May 2016: Given to those first-year students or sophomores whose performance in their first two semesters of physics shows exceptional promise.

Skills

Programming Expertise: R, SQL (Snowflake), Python

Technical Expertise: machine learning, causal inference, A/B testing, survival analysis, AWS ecosystem