Charlie Guthrie

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SENIOR DATA SCIENTIST

Senior data scientist and visualization engineer with a wealth of experience transforming large sets of data into actionable insights. Expertise in helping teams quantify and reach goals. I build pipelines, statistical models, dashboards, A/B testing frameworks, and other tools that enable teams to make better decisions.

TECHNOLOGIES: Queries and pipelines in SQL, Airflow, Hive ETL, AWS and other Big Data technologies; Analysis in Python (Pandas, NumPy, SKLearn), R, Excel, Shell Scripting; AI LLM GPT APIs; Data Vis/Front-End in Looker, HTML, Flask, CSS, JS, D3.

COMPETENCIES: Building Data Pipelines, Experimentation System Design & Analysis, Defining & Moving Metrics, Statistical Modeling, Dashboards, A/B Testing, KPI Definition, Data Literacy, Decision-Making, Problem-Solving, Business Intelligence Analytics; applying LLM APIs to business use-cases.

PROFESSIONAL EXPERIENCE

DATA SCIENCE CONSULTANT   **2023 - Present**
- Founded seed-stage startup, **Bookworm GPT**, whose AI product reads long documents and answers questions about them with citations. Applications primarily in legal work, healthcare, and intelligent document search.
- Uber contract - validated and productionized Brand Health Tracker pipeline, which tracks brand awareness and affinity.

Coursera - SENIOR DATA SCIENTIST   **2022 - 2023**
- Empowered the paid media team to optimize ad spend by setting up return-on-investment (ROI) measurement by channel. Authored a script for estimating ROI for TV campaigns. Enabled the team to achieve 187% ROI on the latest campaign.
- Built & maintained pipeline of users attributes such as language, geography, and users' interests to enable self-serve audience creation by the email marketing team for campaigns. Brought in 300k+ new paying learners into the program.
- Instituted company-wide KPIs that measured marketing and acquisition team performance as well as top-of-funnel growth. Shifted the priority to focus more on meaningful KPIs with concrete objectives.

Udemy - SENIOR DATA SCIENTIST   **2019 – 2022**
- Founded and led the Experiment Review Council, overseeing 150+ experiments in 2021; which in turn generated $21M in annualized lift.
- Built out a system that identified and removed bots from experiment results, eliminating nearly 60% of invalid traffic. Accelerated the rate of experiment results with fewer experiment restarts.
- Clearly defined metrics for learning engagement, constructed a model that studied drivers, and enhanced the user experience. Boosted learning engagement by 11% year-over-year.
- Championed a project that incorporated non-video engagement into the instructor compensation package. Incentivized instructors to include more content beyond just standard video.

Facebook - DATA SCIENTIST   **2017 – 2019**
- Designed and implemented an accuracy measurement to benchmark and approve the moderation systems. Determined the most accurate sampling distribution and headcount requirements for a body of expert moderators that judged the accuracy of 15k+ content moderators. Decreased the number of errors by 40% in one year.
- Built model identifying ambiguous cases; led to the creation of the Oversight Board for review (oversightboard.com).

New York Times - DATA VIS ENGINEER   **2013 – 2015**
- Expanded data literacy, access, and decision-making by developing and implementing custom interactive visual dashboards in D3.js. Delivered outstanding business intelligence analytics across 10+ departments, including financing and advertising teams.

EDUCATION & PROFESSIONAL DEVELOPMENT

MSc in Data Science, New York University
BA in Mathematics, Dartmouth College