Charlie Guthrie

Data scientist and visualization engineer

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WORK

Udemy
Sr. Data Scientist
Apr 2019 - Present

- Defined metrics for learning engagement, a company-level KPI; built model to study drivers, achieved 11% YoY increase.
- Founded and led Experiment Review Council in Jan 2021, which has overseen 95 experiments as of Jun 2021. Those experiments were responsible for $13M in annualized revenue lift.
- Built system for identifying and removing bots from experiment results. Up to 60% of traffic had been bots, which was blocking experiment analysis.
- Led project to incentivize instructors to make courses more interactive.

Facebook
Data Scientist
Jul 2017 - Mar 2019

- Developed accuracy measurement for Facebook's content moderation systems, which remove porn, hate speech, etc. from 40M posts per month. Reduced error by 40% in a year.
- Determined sampling distribution and headcount requirements for body of expert moderators who judge the accuracy of 15,000 content moderators.
- Developed model to identify ambiguous cases, which realigned team to focus on improving accuracy in more actionable, straightforward cases. Recognition of the limits of Facebook content moderators in ambiguous cases led to creation of the Oversight Board.

Amazon (Audible)
Data Science Intern
Spring 2017

- Natural language processing research to cluster user comments and identify trends in customer support needs.
- Keyword extraction and automatic summarization of Audible's library.

Cadent
Data Science Intern
Summer 2016

- Used variational auto-encoding to simulate & preserve sensitive data, critical for our forecasting models.
- Overhauled design of ad forecasting system.

New York Times
Data Vis Engineer
May 2013 - Jun 2015

- Broadly expanded data literacy, access, and decision-making by developing custom interactive visual dashboard in D3.js, used for business intelligence analytics across 10+ departments, including finance & advertising.

EDUCATION

See projects at charlieguthrie.com

New York University
Sep 2014 - May 2017

MSc Data Science
- Coursework included Statistics, Deep Learning, Machine Learning, Big Data, Inference, Natural Language Processing, and Algorithms

Dartmouth College
Sep 2003 - Jun 2007

B.A. Mathematics
- Coursework included Mathematical Statistics, Modeling, CS

SKILLS

Data Science
- SQL, Hive ETL; Analysis in Python (Pandas, NumPy, SKLearn), R, Excel; deep learning with Tensorflow/Torch.

Data Vis / Front-end
- HTML, CSS, Javascript, specializing in D3 and JQuery.

Other
- Shell scripting; French; Comics at instagram.com/charlesdguthrie