Mohit **Gangwani**

Senior Data Scientist

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Summary

Strategically-minded Senior Data Scientist with over seven years of experience in developing and deploying machine learning models, leading A/B testing, applying causal inference, and statistical analyses to drive high-impact business decisions. Proven track record in leading cross-functional teams to innovate and implement data-driven solutions, enhancing product development, and revenue growth. Adept at bridging the gap between technical teams and executive leadership to align strategic objectives.

Employment

Walmart Connect (formerly Vizio, Inc.)   *San Francisco, CA*
Senior Data Scientist   *May 2021 – Present*

- Targeting & Segmentation
  - Led a team of four data scientists to design a multivariate change-point detection algorithm to identify the change in stages of the target audience behavior. Improved target audience prediction precision by 98% using Logistic Regression.
  - Developed a scalable targeting and scoring methodology and expanded the audience size by over 20 times.
  - Applied Ordinal Regression to predict ranks within target audience with an overall accuracy of over 60%.
- Cross Channel Measurement
  - Developed TV and cross channel panels using Automatic Content Recognition (ACR) datasets and improved nationally represented panel which improved reach rating by 10% for various campaigns.
  - Designed and implemented a weight smoothing factor which reduced overestimated reach rating for various campaigns by 20% due to small panel size and provided a better alignment with Nielsen report.
  - Developed and led monitoring metrics for the production panel and weighting jobs including job health checks and abnormal panel trending detection using nonparametric statistical test.
- Unsupervised Time Series Anomaly Detection System
  - Implemented unsupervised time series anomaly detection using TensorFlow + ARIMA.
  - Reduced respond times for anomalies in the data pipeline ETLs and the customer reports by the SRE team to localize an issue by 28%.
- Commercials Feed Enhancement
  - Used probabilistic models and heuristic algorithms to eliminate overlapping sessions, deduplicate, and retain the right commercial from the ACR system.
  - The model contributed to a 50% increase in ad revenue through improved commercial data integrity, showcasing the impact of effective data analytic strategies.
- Smart TV Viewership Forecasting: Built scalable time-series forecasting models (LSTM) for viewership patterns, aiding ad inventory planning and driving strategic partnerships.
- Cross-Functional Leadership: Partnered with Engineering, Product, and QA to launch data-powered features, improve monitoring, and validate critical system updates.
- Team Growth: Scaled the data science org from 3 to 20+ members, mentoring new hires and fostering a culture of innovation and operational excellence.

Vizio, Inc. (formerly Inscape Data) *San Francisco, CA*
Data Scientist *May 2019 – May 2021*
- Recommender model for TV shows
  - Created a "weighting" mechanism based on the network consideration set clustering and improved the precision of the original content-based TV recommender by over 10%.
  - Collected synopses of TV shows across 24 networks and applied Latent Dirichlet Allocation (LDA) to assign probability scores of topics and generated similar TV shows using cosine distance metric.
- Created and implemented new POC to improve device attribution for millions of devices by 25%.
- Automated data cleaning processes, improved data quality, and reduced prep time for analytical tasks by 35%.
- Supported various departments to deploy new features, reviewing code, providing metrics, creating custom dashboards, automated tools, and with ad-hoc requests.

Boons, Inc (Startup) *Fremont, CA*
Data Scientist *Nov 2018 – Apr 2019*
- Achieved 99% precision in ride cost price prediction by innovating with TensorFlow-based Neural Network.
- Enhanced data processing efficiency and cost management by automating scripts in Python and SQL, reducing overhead costs by 95%, showcasing proficiency in key programming languages and cost-saving methodologies.
- Maximizing efficiency + teamwork by collaborating with employees, creating project goals, and optimizing workflow.

Personal Projects

Rise Over Run (iOS App)
- Created and prototyped a mobile app in SwiftUI that helps people find walking routes in hilly cities like San Francisco and Seattle with the least elevation gain, using MapKit, OpenStreetMap, and elevation APIs.
- Applied geospatial data science methods to compare route gradients, giving users the choice between "flattest" and "shortest" paths to make urban travel more accessible and user-friendly.
- Defined the product roadmap and business model, including MVP scope, early monetization ideas, and potential partnerships with accessibility groups.

Skills and Tools

Machine Learning and AI
- Supervised Learning: Logistic/Linear Regression, XGBoost, Random Forest
- Unsupervised Learning: Clustering, Dimensionality Reduction, Topic Modeling (LDA)
- Deep Learning: Neural Networks, TensorFlow, PyTorch, Sequence Modeling
- Causal Inference & Experimentation: A/B Testing, Uplift Modeling, Causal Impact

Data Analysis and Visualizations
- Tools: PySpark, PyTorch, Airflow, SQL, Python, GitHub, Neural Net
- Time Series & Forecasting: ARIMA, Prophet, LSTM
- Visualization: Tableau, Plotly, Matplotlib

Product and Business Collaboration
- Working cross-functionally amongst various teams (engineering, product, QA, project, ops) to create end to end plans for projects and an accountability network that includes executives and stakeholders.

Education

M.S. Data Science (Expected 2026) – University of Colorado Boulder   Boulder, CO
Data Science Immersive Bootcamp – Galvanize, Inc.   Seattle, WA
B.S. Civil Engineering – San Jose State University   San Jose, CA