

# Colby Reichenbach

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## SUMMARY

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Data analyst skilled in Python, SQL, and machine learning, with hands-on experience in predictive modeling, data visualization, and A/B testing. Developed multiple end-to-end projects, applying statistical methods to real-world datasets. Passionate about leveraging data to drive insights and optimize decision-making.

## PROJECTS

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### Customer Churn Data Insights and Prediction

**Skills:** Python, Machine Learning, Data Visualization, Predictive Modeling, Feature Engineering

- Built a customer churn prediction model using Logistic Regression (84% accuracy) to identify high-risk customers.
- Conducted Exploratory Data Analysis to uncover key churn.
- Recommended data-driven retention strategies, improving customer engagement and long-term contracts.

### Marketing Campaign A/B Testing and Funnel Analysis

**Skills:** Python, A/B Testing, Statistical Analysis, Marketing Analytics, Data Visualization

- Analyzed 1,143 ad campaigns, identifying high-ROI strategies using A/B testing & Chi-Square analysis.
- Uncovered inefficient ad spending, leading to budget reallocation & 8x conversion improvement.
- Built conversion funnels to optimize user engagement, click-to-conversion rates, and ad creatives.

### Finance Data Pipeline & Machine Learning | (Currently in Development)

**Skills:** Python, SQLite, Yahoo Finance API, LSTM, XGBoost, Real-Time Data Processing

- Built a real-time financial data pipeline with Yahoo Finance API, updating stock data every 15 minutes.
- Developed machine learning models for market anomaly detection & stock forecasting.
- Designed a live dashboard via Streamlit visualizing market trend, sector performance, and predictive analytics.

### E-Commerce Analytics Dashboard

**Skills:** Data Visualization (streamlit, plotly), SQL, Python, Machine Learning (K-Means)

- Developed an interactive E-commerce Analytics Dashboard (Python, Streamlit, Plotly, SQL) to visualize key performance indicators including revenue, product performance, and shipping logistics, providing actionable insights for business optimization.
- Implemented a K-Means customer segmentation model to identify high-value vs. at-risk customer groups, enabling targeted marketing strategies.
- Ensured credential security using Streamlit secrets and designed a modular structure for scalability.

## EDUCATION

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**University of North Carolina at Chapel Hill**

August 2024

*BS in Biology, Minor in Data Science*

- *Relevant Coursework: Statistics and Data Science, Machine Learning and Ethics, Scientific Programming*

## SKILLS

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- **Programming & Data Analysis:** Python (Pandas, NumPy, Scikit-Learn), SQL, R

- **Machine Learning & AI:** Regression, Classification, Time Series Forecasting, Anomaly Detection
- **Data Engineering & Databases:** SQL, Web Scraping, API Integration & Data Retrieval
- **Data Visualization & Reporting:** Tableau, Matplotlib, Seaborn, Plotly, Streamlit
- **Statistical Analysis:** Hypothesis Testing (A/B Testing, T-Tests, Chi-Square, Z-Tests, ANOVA)
- **Soft Skills:** Data Storytelling, Business Insights, Communication, Problem-Solving

## PROFESSIONAL EXPERIENCE

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**Target, Team Member,** Chapel Hill, NC

Aug. 2021 – Pres.

- Assisted customers and maintained inventory to support **operational efficiency**.
- Collaborated with team members to **analyze sales trends & improve product placement**.

**Mosquito Authority, Facilities Technician,** Winston Salem, NC

May 2022 – Aug. 2022

- **Maintained and repaired equipment** to ensure smooth field operations.
- Documented inventory & expenses, helping optimize **resource allocation**.

**GRIT Performance, After-School Program Facilitator,** Advance, NC

Jan. 2016 – Sep. 2019

- Organized and supervised **athletic & educational programs** for students.
- Built **strong relationships with parents & staff** to enhance student engagement.