# Gabriel True

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## PROFILE

Data Scientist at Aimpoint Digital and recent University of Chicago graduate (CS + Econ), specializing in machine learning, data science, and solution engineering. Experienced in deploying analytical and AI-driven systems across industries, with a background spanning finance, scientific computing, and analytics. Passionate about building scalable models solving real-world problems.

## EDUCATION

**The University of Chicago**                                                                                          Chicago, IL

*BA in Computer Science & Economics*                                                                           June 2025

Specializations: Machine Learning (Computer Science), Data Science (Economics)

Relevant Coursework: Machine learning, Causal inference, Scientific visualization, Large-scale data analysis, Time series analysis

## EXPERIENCE

**Associate Data Scientist |** *Aimpoint Digital*                                                July 2025 – Present
- Applying machine learning, statistical modeling, and inference techniques to deliver data science solutions in a consulting role.

**Data Analyst |** *CareerVillage*                                                              October 2024 – June 2025
- Performed sentiment and statistical analysis on 100k+ LLM chat logs using Python, including correlation metrics ($R^2$, Pearson, Spearman), hypothesis & significance testing, NLTK implementation, and K-means clustering to identify factors driving user satisfaction.
- Engineered a cloud-deployed OpenAI summarization pipeline using recursive chunking and prompt optimization to compress long-form chat logs exceeding token limits for stakeholder-facing reporting and integrated results within the BigQuery database.
- Presented findings across cross-functional teams, translating statistical insights into recommendations that informed engagement strategy.
- Queried and joined datasets from PostgreSQL and BigQuery via Metabase to build dashboards and extract product-facing data narratives.

**Quantitative Analyst Intern |** *Shepherd Ventures*                                   March 2024 – October 2024
- Designed a vectorized K-means clustering pipeline for asset preselection, incorporating the Davies-Bouldin and statistical financial metrics such as drawdown and beta to identify quasi-deterministic groupings analyzed in portfolios
- Applied GARCH modeling and mean variance optimization to forecast volatility and allocate weights under risk constraints
- Conducted time series backtesting of novel quantitative strategies, using rolling windows to evaluate performance and variance
- Researched and integrated advanced utilizations of essential machine learning and time series tools such as principal component analysis, EGARCH modeling, and ARMA model regressions to improve predictive power on public financial datasets
- Recognized as fastest intern to reach modeling competency in a standardized training program across a cohort of 20+ analysts

**Quantitative Developer Intern |** *AlphaOcean*                                        March 2024 – June 2024
- Applied linear programming in Python using PuLP to reconstruct fueling allocations under regulatory constraint across international waters
- Performed Monte Carlo simulations to evaluate optimal fueling strategies for oceanic vessels under uncertainty and cost variability
- Analyzed datasets using time series analysis, econometric modeling, and forecasting to generate insights presented to the CEO & CTO
- Proposed a new data visualization strategy to communicate service value to clients, adopted for integration in client-facing deliverables

## PROJECTS/CERTIFICATIONS

**Diffusion Probabilistic Model |** *Machine Learning & Large-Scale Data Analysis Course*          May 2025
- Developed and trained denoising diffusion probabilistic models for generative modeling on MNIST, leveraging VAE-inspired architectures and time dependent U-net parameterizations
- Evaluated model performance in generated images using Fréchet Inception Distance (FID) scores and generative sample visualizations

**Personal/Portfolio Website |** *Personal Project – https://gabrieltrue.com*                       June 2025
- Built a personal portfolio website using HTML, CSS, and JavaScript to present technical experience and projects in a structured format

**Volume Renderer |** *Scientific Visualization Course*                                            March 2024
- Implemented a 3D image processing tool in C which handled .nrrd files containing over 100,000,000 data points
- Utilized parallel programming to efficiently handle mathematical techniques required for imaging such as convolution and vector calculus

## SKILLS

**Languages & Libraries:** Python (NumPy, Pandas, scikit-learn, PyTorch, Folium, SciPy, Django, TensorFlow, NLTK), SQL (PostgreSQL, BigQuery), R, C, C++, Bash , HTML, CSS (Tailwind), JavaScript (D3, React, Node.js), Coq, Typed Racket

**Concepts & Techniques:** Supervised/Unsupervised Learning, Time Series Analysis, PCA, Optimization, Model Evaluation (AIC, $R^2$, JB)

**Tools & Environments:** PowerBI, Google Cloud, Metabase, Git, macOS, Linux, Windows, SSH, GitHub, Jupyter, Terminal, Microsoft Suite