

Christony Olande

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SUMMARY

Final-year Statistics & Programming student specializing in hierarchical modeling, causal inference, and Bayesian computation. Builds statistical pipelines in R and production agentic systems in Python.

EXPERIENCE

Machine Learning Data Specialist

Cloudfactory Kenya

September 2022 - April 2024, Nairobi, Kenya

- Developed high-precision ground truth datasets for Computer Vision tasks including 3D bounding box estimation and semantic segmentation for autonomous systems.
- Engineered data validation pipelines and performed statistical quality control to minimize label noise, directly improving client model mAP and F1 scores.
- Conducted iterative model error analysis, identifying distributional edge cases in complex spatial datasets to systematically improve training data coverage.

PROJECTS

Causal Impact of Russia-Ukraine Invasion on US Gasoline Prices

Nairobi, Kenya • February 2026 - March 2026

- Constructed a causal DAG over 6 nodes in dagitty/ggdag to derive the minimal adjustment set {WTI crude, refinery utilization, gasoline stocks, seasonality}, blocking 3 backdoor confounding paths.
- Trained a Bayesian Structural Time Series model on 36 months of pre-invasion FRED and EIA data, producing a synthetic control counterfactual and estimating a posterior average treatment effect with 95% credible intervals.
- Engineered a counterfactual baseline by cross-validating 36 months of pre-intervention data, isolating post-February 2022 causal impacts.

Clinical Trial Matching Agent

Nairobi, Kenya • github.com/Chrisolande/clinical_trial_agent • January 2026 - February 2026

- Designed a parallel fan-out LangGraph agent using the Send API, achieving 30% faster processing through concurrent reasoning nodes.
- Reduced redundant inference calls by 10x using PostgreSQL-backed episodic memory and LLM response caching.
- Enforced schema contracts with Pydantic v2 and locked graph topology before granting autonomous execution rights.

Australian Rainfall Dynamics

Nairobi, Kenya • chrisolande.github.io/australian-rainfall-dynamics/ • December 2025 - February 2026

- Fit a Zero-Inflated Gamma GLMM on 142k+ daily observations across 49 stations, with a logistic sub-model for structural zeros (64% of data), a Gamma component for positive amounts, and station-level random intercepts.
- Estimated nonlinear seasonal effects via natural spline expansions; selected knot configurations using mitml D1 likelihood-ratio tests across 20 MICE-imputed datasets pooled under Rubin's Rules.
- Confirmed distributional fit across all 49 stations via DHARMA randomized quantile residuals.

EDUCATION

BSc in Statistics and Programming

Kenyatta University • Nairobi, Kenya • August 2022 - December 2026

- Relevant Coursework: Statistical Inference, Bayesian Statistics, Theory of Estimation, Measure Theory, Linear Algebra, Probability Theory, Stochastic Processes.

Bsc in Analytical Chemistry

University of Nairobi • Nairobi, Kenya • September 2021 - August 2022

SKILLS

Technical Skills: Probabilistic Programming (PyMC/Stan), Agentic Orchestration (LangGraph/DSPy), Causal Inference (CausalImpact), High-Performance DL (PyTorch/FAISS), Advanced Mixed-Effects (glmmTMB/brms).

Soft Skills: First-Principles Problem Translation, Uncertainty Quantification, Technical Leadership, Autodidactic Engineering, Algorithmic Empathy
