Kena Tuitoek

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Quantitative researcher with Python, R and SQL experience building and maintaining reproducible pipelines, integrating multi-vendor datasets, and developing quantitative research. Recently developed a larger (~1M-row) trade and carbon-pricing panels, managed data documentation for a multi-research project and handled day-to-day queries. Proficient in Python (pandas, scikit-learn), SQL, R and Stata, with strong attention to detail, clear communication and a process-driven approach to data quality and reliability.

EDUCATION

University College London, MSc Data Science and Public Policy (Hons) | London, UK   **2025 - 2026**
▪ Modules: Statistical Programming, Machine Learning, Econometrics, Advanced Micro-econometrics, Quantitative Text Analysis

The University of Sussex, BSc Economics (Hons) | Falmer, UK   **2022 - 2025**
▪ First-Class Honours | Modules: Economics & Data Science, Data Coding and Visualisation, Applied Econometrics, Advanced Microeconomics, Industrial Organisation

RESEARCH & TECHNICAL PROJECTS

Digital Infrastructure of Carbon Pricing and Trade
▪ Mapping digital infrastructure of EU carbon pricing systems (ETS, CBAM): analysing emissions registries, MRV platforms and cross-border data flows through the lens of international cyber norms (UN GGE/OEWG, Budapest Convention).
▪ Developing a cyber capacity-building framework for CBAM implementation in EU-Africa trade, combining gravity model trade analysis with digital governance scholarship to inform equitable climate policy infrastructure.

Gravity Model of Africa's Bi-lateral Trade (Stata, PPMLHDFE)
▪ Econometric modelling and causal inference: Estimated gravity model of trade using PPML with importer-year, exporter-year, and pair fixed effects on 960K pair-year observations; stress-tested specifications with border-year controls and 2/4/6-year lag structures.
▪ Reproducible research pipeline: Built an end-to-end data pipeline for CEPII gravity panel (1960-2021) with joint WTO and disaggregated PTA indicators, a fully reproducible workflow in R/Stata.
▪ Applied Policy research: Quantified trade policy effects; WTO membership increases African bilateral imports by 15-19%, customs unions deliver 20-25% persistent gains, while shallow FTAs show negligible impact; these findings inform regional trade integration recommendations.

Data Visualisation Training Workshop | UKRI Data Science DRI
▪ Built an interactive data visualisation suite (Plotly, Bokeh, Altair, Streamlit) suitable for multi-stakeholder audiences (researchers, policy makers, public); implemented modular data loaders and reusable chart components enabling rapid data integration
▪ Applied Machine Learning pipelines (decision trees, classification, clustering) with custom visualisations for model diagnostics (calibration curves, feature importance, uncertainty quantification) tailored for non-technical decision-makers.

Sentiment Analysis Pipeline (Python, NLTK)
▪ Engineered an end-to-end NLP classification pipeline on film review corpus: pre-processing (tokenisation, n-grams), TF-IDF feature extraction, and multi-model evaluation (Naïve Bayes, Logistic Regression, SVM)
▪ Implemented rigorous model validation with cross-validation, precision-recall analysis, and interpretability diagnostics (feature coefficients, confusion matrices); performed error analysis

Portfolio Risk Modelling (Python & Stata)
▪ Time series analysis and distribution diagnostics: constructed weekly return for comparative asset analysis, using kernel density estimation, quantile analysis and normality tests.
▪ Implemented linear factor model with hypothesis testing; applied nonparametric alternatives (Mann-Whitney U) when parametric (normality) assumptions failed, ensuring robust statistical inference.

RELEVANT EXPERIENCE

Nemea Fund, Analyst | Falmer, UK   **10/2023 - 06/2025**
▪ Utilised Bloomberg Terminal to extract and synthesise macroeconomic and industry data to provide quantitative investment decisions.
▪ Built and optimised CAPM portfolio models in Stata, reducing potential losses by 15% through volatility analysis.

Education First, Residence Advisor | Brighton, UK   **06/2024 - 09/2025**
▪ Primary point of contact and facilitated student onboarding, including registration and orientation, reducing registration errors by 40%.
▪ Maintained administrative databases (Elektra & Atlantis) to track allocations and student preferences, improving service personalisation.

Skills: Python (pandas, NumPy, matplotlib, NLTK), Stata, SQL, R, Bloomberg Terminal, MS Office Suite.
Certificates: Data Storytelling for Digital Research Infrastructure| Bloomberg Market Concepts | Introduction to Capital Markets.