Samuel Kwaku Basoah

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Summary

Economist and Ph.D. candidate specializing in macroeconomics, financial stability, and applied econometrics, with professional experience in economic analysis, financial risk assessment, and policy research at CMHC and PacifiCan. Skilled in quantitative modelling, economic forecasting, machine learning, and large-scale data analysis using R, Python, Stata, and SQL. Experienced in translating complex economic and financial research into executive briefings, analytical reports, and actionable policy insights.

Skills & Languages

- **Economic analysis & Forecasting:** Macroeconomic modelling, Economic forecasting, Econometric modelling, Scenario analysis, Panel econometrics, VAR/SVAR, Time-series forecasting, Financial risk modelling, Causal inference.
- **Programming:** R, Python, Stata, SQL, Power BI.
- **Machine Learning & NLP:** Transformer models (BERT, RoBERTa, FinBERT), Sentiment analysis, Text classification, Topic modelling, XGBoost, PyTorch, Hugging Face.
- **Languages:** English (Fluent), French (Fluent), Mandarin Chinese (Intermediate).

Education

- **PhD in Economics**, Simon Fraser University, Burnaby, BC *Aug 2021 – June 2027 (expected)*

  Main Supervisor: Prof. Luba Petersen
  Fields: Macroeconomics, Financial Economics, Natural Language Processing (NLP), and Machine Learning
  CFA: Level 1 (Scheduled Feb 2027)
- **MA in Economics**, Simon Fraser University, Burnaby, BC *Aug 2019 – Aug 2020*
- **BA in Economics**, University of Ghana *Sep 2014 – Jun 2018*
- University of Sussex, Research Exchange Program, United Kingdom *Jun 2017 – Aug 2017*

Professional Experience

Power BI & R Specialist, Pacific Economic Development Canada ***Dec 2023 – Mar 2024***

- Developed analytical dashboards supporting regional economic analysis and policy evaluation.
- Collaborated with senior economic policy analysts to produce analytical tools and reporting for government stakeholders.
- Delivered presentations and training sessions translating economic data into actionable policy insights.

Senior Analyst, Risk Management and Finance Division, Canada Mortgage and Housing Corporation (CMHC) ***Dec 2021 – Dec 2022***

- Produced economic reports, executive briefings, and presentations on Canadian housing markets, housing affordability, housing market risk, and energy-efficient housing to support senior management and strategic decision-making.
- Developed housing market risk indicators using large administrative datasets in R, SQL, and Power BI.

- Applied time-series forecasting, econometric modelling, and scenario analysis to assess mortgage and housing market risks and support enterprise risk management.
- Automated recurring analytical reporting, improving reporting efficiency by 95%.

Senior Data Specialist, Qatalyst ***Jun 2021 – Aug 2021***

- Analyzed COVID-19 employer survey responses and delivered analytical summaries to internal research leadership.

Selected Research Projects

Beyond the Fed: The Information Content of Bank Supervisory Communication *PhD Research, 2021–Present*

- Constructed a sentence-level supervisory sentiment index from 1,388 FDIC communications (1978–2025) using domain-specific NLP methods, topic modelling, and transformer-based language models (FinBERT and RoBERTa).
- Developed an end to end NLP pipeline for automated data collection, text preprocessing, sentiment extraction, and index construction using Python, PyTorch, and R.
- Developed econometric methods to isolate unexpected innovations in supervisory sentiment and applied event study methods to evaluate financial market responses.
- Integrated text based sentiment measures with over 1.4 million bank quarter observations and applied local projections, Bayesian vector autoregressions, panel fixed effects models, and logistic regressions.
- Found that favorable supervisory sentiment innovations are associated with higher bank excess stock returns, increased uninsured deposits, lower deposit funding costs, and reduced odds of bank failure.

Digital Government & Sovereign Default Risk: Tax Enforcement and Revenue Diversion *PhD Research, 2021–Present*

- Built and calibrated a quantitative sovereign default model; simulated 25,000 paths to generate impulse responses, reproduce empirical moments, and produce model simulated datasets.
- Used NLP methods to identify digital fiscal reform events across 46 emerging economies from policy and news text, combined with World Bank DAI and EMBI spread data..
- Documented that digital fiscal reforms are associated with improvements in tax revenue, translating NLP identified reforms into macro-financial signals.

Research Experience

Graduate Research Assistant, SFU ***Feb 2026 – Present***
Research Supervisor: Prof. Luba Petersen

- Designed and implemented a randomized survey experiment to evaluate behavioral responses to wildfire risk information across British Columbia.
- Developed regional and province (state) wide wildfire risk maps for British Columbia.
- Developed geospatial classification algorithms covering 122,000+ postal codes to support large scale experimental deployment and regional analysis

Graduate Research Assistant, SFU ***May 2025 – Sept 2025***
Research Supervisor: Prof. Kevin Schnepel and Prof. Pierre Mouganie

- Merged crime and homelessness datasets in R to evaluate the effect of temporary modular housing on neighborhood crime outcomes.

Graduate Research Assistant, Beedie School of Business, SFU ***Jan 2023 – Sep 2023***
Research Supervisor: Prof. Deniz Anginer

- Reviewed regulatory literature on bank runs and deposit insurance.
- Estimated credit risk models using logistic, probit, and OLS techniques on firm level data.

Junior Research Associate, University of Sussex ***Jun 2017 – Aug 2017***
Research Supervisor: Prof. Julie Litchfield

- Conducted literature synthesis, data cleaning, and model estimation for research presentations.

Teaching Experience

Graduate Teaching Assistant, SFU ***Aug 2019–Aug 2020, Aug 2021–Dec 2026***

- Supported instruction in undergraduate economics across 24 courses, including advanced time series econometrics, International & Public Finance, Criminology and Law, Ecological Economics and Intermediate Macroeconomics.
- Programmed R based forecasting assignments and supported quantitative training in financial econometrics and macroeconomics.
- Communicated complex economic concepts to undergraduate students and diverse audiences.
- **Achievements:** Mentored 15 new teaching assistants and enhanced tutorial delivery as Head Teaching Assistant. Received the Terry Heaps Outstanding Teaching Assistant Award (2024) and the Faculty of Arts and Social Sciences Teaching Assistant Award (2025) at Simon Fraser University.

Research Grant

- Pacific Institute for Climate Solutions: Policy Spark Research Grant Program, $20,000, Collaborator. "Mitigating Wildfire-Urban Spread Through Risk and Strategy Communication"

Conferences & Workshops

- Pacific Institute of Climate Solutions (PICS) Policy Spark Workshop (Participant, 2026)
- The Central Bank of Gambia 55th International Conference (Upcoming).
- Canadian Economics Association Annual Conference (Presenter & Chair: 2025, 2026).
- SFU Department of Economics TA Workshop (Organizer: 2024, 2025, 2026).
- SFU Center for Educational Excellence TA Day (Presenter: 2026).
- Pacific Economic Development Canada Training Workshop (Instructor: 2024).
- University of Chicago Summer Institute in Data and Policy (Scholarship Recipient: 2021).

Selected Awards

- Prof Emeritus Peter Kennedy Award in Macroeconomics (2025), Recipient of the SFU Faculty of Arts and Social Sciences Best Teaching Assistant Award (2025), Travel and Research Award (2025), Presidents PhD Scholarship Funding (2024), Terry Heaps Outstanding Teaching Assistant award (2024), PhD Research Scholarship (2023-present), Doreen Wilkinson Memorial Scholarship (2021), Peter Kennedy Memorial Graduate Entrance Scholarship (First Recipient, 2021), Special Graduate Entrance Scholarship (2021), Meiyu Li Memorial Award (2021), University of Chicago Data and Policy Summer School Scholarship (2021), University of Oxford's Top 5 Rhodes Nominees (2019), University of Ghana Best Graduating Economics Student (2019), University of Ghana Best Level 300 Economics Student (2018).