STIVI CANKA

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Email | Website | LinkedIn | GitHub

RESEARCH & PROFESSIONAL INTERESTS

Computational economics and machine learning applications to macroeconomic systems. Interested in heterogeneous-agent modelling, real-time forecasting, and quantitative methods for monetary policy analysis and financial markets.

EDUCATION

Sep 2021 – Apr 2024
Halifax, NS

Dalhousie University | GPA: 4.27/4.30
- BA (Honours) in Economics, Double-Minor in Mathematics & Business
- Undergraduate Certificate: FinTech & Financial Innovation

RESEARCH EXPERIENCE

Sep 2023 – Apr 2024
Halifax, NS

Dalhousie University | *Undergraduate Honours Thesis* (Supervisor: Christos Ntantamis)
Thesis: *Shifting Macroeconomic Tides: Investigating the Impact of Interest Rate Uncertainty on the Canadian Economy*
- Built Python pipeline to process 15,000+ daily T-bill return observations and developed novel market-based uncertainty metric from return volatility, addressing limitations of survey-based and keyword-frequency proxies
- Implemented six VAR-X econometric models in Gretl and R across different lag structures and sample periods; found statistically significant negative effects on GDP (0.15% decline per SD shock) and investment (0.25% decline per SD shock)
- Improved model R^2 from 0.19 to 0.28 through integration of EPU and OPU controls; validated uncertainty metric against major macroeconomic shocks (2008 financial crisis, COVID-19)

Sep 2022 – Nov 2023
Halifax, NS

Bank of Canada Governor's Challenge | *Team Lead* (Supervisor: James McNeil)
- Led team to runner-up finish among 26 Canadian universities; developed 24-month VAR(2) model analysing CPI decomposition, labour market trends, and inflation expectations to assess monetary policy transmission mechanisms
- Designed risk scenarios integrating household debt stress and energy shocks; synthesised forecasts with Bloomberg Terminal and Statistics Canada data and presented policy recommendations to panel of Bank of Canada economists

PROFESSIONAL EXPERIENCE

Jun 2024 – Aug 2025
Toronto, ON

KPMG | *Technology Risk Consultant*
- Conducted enterprise risk assessment for a Top 5 Canadian pension fund ($250B+ AUM); findings directly drove enterprise risk framework overhaul and development of new operational risk mitigation strategies
- Developed Python analytics tool to detect access control violations across 100K+ user logs; identified unauthorised privilege escalations and untimely access removals, reducing review time from 3 days to under 3 hours
- Built ETL pipelines feeding Power BI dashboards that visualised risk exposure across 30+ control domains; identified $2M+ in potential operational risk reduction, informing executive remediation priorities

Apr 2023 – Aug 2023
Toronto, ON

TD Securities | *Market Risk and Model Development Associate*
- Monitored market risk exposure across $2B+ multi-asset portfolios using VaR analysis, Monte Carlo simulations, stress testing, and sensitivity analysis; flagged positions that exceeded risk limits, prompting portfolio rebalancing
- Streamlined data extraction, transformation, and analysis by automating risk reporting workflows in Python and Excel VBA; reduced monthly reporting cycle by 75%, enabling faster response to market volatility
- Validated risk models through back-testing against historical data; detected systematic underestimation of portfolio risk during volatile markets that led to parameter adjustments and model assumption recalibration

Apr 2022 – Aug 2022
Dieppe, NB

TD Bank | *Financial Analyst*
- Built and maintained financial data pipelines using SQL, Python, and Excel VBA across business units representing $500M+ in annual revenue; designed automated validation frameworks that eliminated manual data verification
- Prepared 15+ quarterly financial statements (P&L, cash flow, MD&A) for executive decision-making; streamlined consolidation process by standardising data templates across 8 business units

Sep 2022 – Apr 2024
Halifax, NS

Dalhousie University | *Teaching Assistant and Academic Mentor*

- Supported instruction for 250+ students across four courses: Regional Development, Intermediate Microeconomics, Perspectives on Economic Development, History of Economic Thought
- Designed and delivered weekly review sessions on microeconomic theory, welfare economics, and quantitative methods; evaluated assignments, graded exams, and held regular office hours
- Served as academic mentor for mathematics and statistics courses at the Student Success Centre; provided specialised tutoring in Linear Algebra, Differential Equations, and Statistics

LEADERSHIP & EXTRACURRICULAR EXPERIENCE

May 2023 – Present
Online

Albanian Trailblazers | *Founder and President*

- Founded youth-led NGO providing educational opportunities to Albanian students globally; built cross-functional teams in 20+ countries and scaled organisation to 30+ mentors and 90+ mentees
- Designed and launched various initiatives including professional workshop series, educational podcasts, a monthly magazine celebrating Albanian heritage, and an annual networking summit connecting diaspora students with academic and career resources
- Currently leading the development of *Qemal*, one of the first Albanian-language LLM chatbots using retrieval-augmented generation (RAG) architecture; the project uses vector database and semantic search in Python using LangChain to ground responses in Albanian educational content

Jul 2023 – Aug 2024
Halifax, NS

Dalhousie Quantitative Finance Society | *Founder and President*

- Established university's first quantitative finance organisation; organised and led workshops covering modern portfolio theory, derivatives pricing models, and algorithmic trading strategies, growing membership to 50+ students within the first semester
- Led quantitative case competition emphasising econometric forecasting, DCF modelling, and risk-adjusted return analysis; facilitated peer-led sessions applying optimisation frameworks to real-world trading and business management scenarios

TECHNICAL SKILLS & QUALIFICATIONS

Programming:	Python (NumPy, Pandas, Scikit-learn, LangChain), R, Stata, SQL, Julia, MATLAB, VBA, Gretl, LaTeX
Software & Tools:	Git/GitHub, Bloomberg Terminal, Jupyter, Power BI, Excel (advanced modelling)
Methods:	OLS/GLS/WLS Estimation, Time Series Analysis (VAR, ARIMA), Monte Carlo Simulation, Supervised, Unsupervised, & Reinforcement Learning, Retrieval-Augmented Generation (RAG)
Languages:	Albanian (Native), English (Fluent), French (Intermediate)

COURSEWORK

Mathematics:	ODEs, PDEs, Multivariable Calculus, Linear Algebra, Real Analysis, Probability & Statistics
Economics:	Econometrics, Monetary Policy, Intermediate Microeconomics, Intermediate Macroeconomics
Finance & Business:	Corporate Finance, International Finance, Financial Institutions, Portfolio Management

CERTIFICATIONS

2025	Algorithms Specialisation – Stanford Online
2025	Machine Learning Specialisation – Stanford Online
2025	MITx 6.00.1x: Introduction to Computer Science and Programming Using Python – MIT
2024	Undergraduate Certificate in FinTech & Financial Innovation – Dalhousie University
2024	Research Camp Full Program Certificate – Dalhousie University

HONOURS & AWARDS ($10,000+ in Merit Scholarships)

2024	University Medal in Economics – Dalhousie Department of Economics
2024	Best Economics Research Paper Award – Dalhousie Department of Economics
2024	Douglas C. Mackay Award for Excellence in Money Management – Dalhousie Faculty of Management
2024	Professor W. Russell Maxwell Memorial Scholarship – Dalhousie Department of Economics
2023	Bank of Canada Governor's Challenge Runner-up – Bank of Canada
2023	CFA Institute Scholarship – Dalhousie Faculty of Management
2023	Marjorie F. Ellis Scholarship – Dalhousie University
2022	John E. Betts "Beat Yesterday" Scholarship – John E. Betts

INTERESTS

· Competitive Football · Mixed Martial Arts · Racing (Gran Turismo 7, Formula 1) · Travel (21 countries)