

Sam Grootelaar

EDUCATION

Rotman School of Management & Department of Economics, University of Toronto

Master of Financial Economics

Toronto, Ontario

Expected June 2026

- **Award:** Graduate Entrance Scholarship
- **Relevant Courses:** Security Analysis and Portfolio Management (MA); Options and Futures Markets (MBA); Econometrics (MA); Financial Economics (MA); Corporate Finance (MBA)

Department of Mathematical and Statistical Sciences, University of Alberta

Honours Bachelor of Science (Major in Mathematics and Economics)

Edmonton, Alberta

Sep 2017 – May 2022

- **Academics:** cGPA 3.5/4.0
- **Awards/Scholarships:** Bank of Canada Governor's Challenge Winner 2021; Chevron Academic Achievement Scholarship; Merit Scholarship for Specialization in Mathematical Sciences
- **Relevant Courses:** Numerical Methods (A), Time Series Analysis (A), Econometric Methods (A+), Computer Science II (A), Mathematical Statistics (A-), Honors Advanced Calculus II (A-), Advanced Macroeconomic Theory (A-)

INDUSTRY CERTIFICATIONS

- CFI Financial Modelling & Valuation Analyst (FMVA) Certification 2024
- Bloomberg Market Concepts Certification 2024

PROFESSIONAL EXPERIENCE

International Emissions Trading Association (IETA)

Analyst

Calgary, Alberta

May 2021 – May 2024

- Produced timely briefs of key regulatory and legislative developments relevant to North American carbon markets
- Formulated IETA government policy submissions based on organizational expertise, independent research, and IETA member input
- Used R and Python for internal modelling of Article 6 of the Paris Agreement and for streamlining tasks

Notable Project: Carbon Contracts for Difference (CCFD) – White Paper

- Assessed the potential for CCFDs to be delivered in Canadian carbon markets by the Canada Growth Fund (CGF)
- Formulated findings in a [white paper](#) delivered to the CGF, Finance Canada, and Environment and Climate Change Canada
- Discussed and presented the paper's findings with key stakeholders at IETA conferences in both Toronto and Vancouver

RELEVANT ACADEMIC PROJECTS

Econometrics: Impact of Alberta's output-based pricing system (OBPS) on labour markets

2022

- Found a relationship between the introduction of Alberta's OBPS and an increase the unemployment rate in line with other studies
- Determined appropriate models (fixed effect) and standard errors considering heteroskedasticity present in the underlying data ([code](#))

Python: Image compression using singular value decomposition (SVD)

2021

- Created Python image compression software using the numpy and matplotlib libraries ([code](#))
- Program deploys SVD, an algebraic technique that allows the extraction and untangling of key information

EXTRACURRICULAR ACTIVITIES

Bank of Canada Governor's Challenge Winner

Research Analyst

Edmonton, Alberta

Sep 2020 – Feb 2021

- Governor's Challenge sees top Canadian universities compete to present a monetary policy recommendation in 15 mins
- Effectively worked in a team to comprehend the extraordinary economic circumstances presented by the COVID-19 pandemic and delivered a recommendation to maintain the overnight rate at the effective lower bound and existing levels of quantitative easing

Analysis Highlights:

- Considerately used the U.S. Federal Reserve's [advice](#) for how best to account for pandemic data in our models
- Uniquely considered business bankruptcy and sentiment metrics to support our forecasting results

PERSONAL

- **Technical Skills:** Basic Excel, Intermediate Python and R ([Github Profile](#))
- **Languages:** Conversational German (A2 Level)
- **Interests:** Photography ([Namibia](#)), automotive enthusiast ([Nissan 350z](#)), audiobook lover ([goodreads](#))