Matthew Senick

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Education

University of Toronto Aug 2021 - May 2022
Masters of Economics *Toronto, ON*
- Relevant Coursework: Economic Applications of Machine Learning (In Progress), Statistical Methods for Machine Learning and Data Mining (In Progress), Econometrics (A-)

University of Saskatchewan Sept 2017 - May 2021
Double Honours Bachelor in Computer Science and Economics *Saskatoon, SK*
- GPA: 3.87
- Awards: Lewis C. Gray Prize in Economics, Popoff Scholarship in Economics, Dean's Honour List, University of Saskatchewan Continuing Scholarship, NSERC Undergraduate Research Award, Greystone Entrance Award
- Relevant Coursework: Deep Learning (89%), Machines & Algorithms (94%), Simulation Principles (91%)

Experience

Research Assistant (Economics) Dec 2021 - Present
University of Toronto *Toronto, ON*
- Built supervised and unsupervised web-scraping NLP-based models to quantify amenity preference sentiment amongst labour force actors (presented at ASSA 2022)
- Cleaned and prepared a multitude of research datasets for ongoing labour economics research

Teaching Assistant (Economics) Aug 2021 – May 2022
University of Toronto *Toronto, ON*
- Led students in "Data Tools for Economists" and "Introduction to Data Analysis and Applied Econometrics"
- Obtained a 96% satisfaction rate in tutorial sessions for students learning data manipulation/analysis techniques

Development and Database Manager (BI and Automation) May - Sep 2020, May - Aug 2021
Affinity Credit Union *Saskatoon, SK*
- Led a project to clean up reporting server standards and create tangible reports regarding data server usage
- Enhanced membership gain and loss reports aiding in back-office analysis and improved front-line efficiency
- Constructed end-user reports and developed ETL pipelines

Intern Market Analyst (Member Experience) Jan - Apr 2020
Affinity Credit Union *Saskatoon, SK*
- Built a decision tree model to learn from consumer product tendencies based on collected biographic data points
- Utilized qualitative research techniques to predict market outcomes for financial products and digital advice tools

Research Assistant (Computer Science) May - Sep 2019
University of Saskatchewan *Saskatoon, SK*
- Aided in implementing and testing machine learning solutions for 'semantic code clone' detection research
- Prepared, manipulated, and managed extensive databases to be fed to machine learning and analytic algorithms

Academic Papers

University of Toronto

Bearish or Bullish? A Predictive Sentiment-Weighted Attention Analysis of the Wall Street Journal

- Web-scraped, cleaned, and tokenized a novel dataset of nearly 100,000 Wall Street Journal articles
- Constructed an LDA model to build time-series topic attention weighted by the RoBERTa sentiment transformer
- Applied Lasso regression to indicate the most informative topics over time and predicted market index fluctuations

Technical Skills

Skills: Machine Learning, NLP, Web Scraping, Econometric Analysis, Research Techniques
Programming Languages: Python, SQL, R, Stata, C, Java, Scala, Visual Basic, JavaScript, C++, Git
Libraries: TensorFlow, Scikit-learn, Pytorch, Pandas, Selenium, Gensim, NLTK
Programs: Anylogic, Weka, SSMS/SSRS/SSIS, Jupyter
Interests: Golf, Hockey, Chess