

Mark Asuncion

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EDUCATION

University of Toronto

Honours Bachelor of Science in Applied Statistics, Minors in Mathematics & Computer Science

Mississauga, ON

Sep. 2019 – May 2024

- Cumulative GPA - 3.88/4.00
- Achieved Dean's Honours List throughout all semesters enrolled
- Relevant Coursework: Regression Analysis, Experimental Design, Machine Learning, Time Series Analysis
- Extracurriculars & Societies: Intramural Basketball, UTMSAM, UTM CSSC, Data Science Toronto

EXPERIENCE

Business Analyst Intern

Environment and Climate Change Canada

May 2022 – Present

Toronto, ON

- Part of the Data Ingestion and Product Development Unit (DIPDU)
- Wrote **50+** business documents and created standardized data schemes for clients all over the country
- Acted as a liaison between DIPDU and various stakeholders to gain data specifications for our products
- Created numerous scripts in **Python** using **Pandas** and **Numpy** to clean and parse different forms of incoming data
- Conducted both **qualitative** and **quantitative** analyses to aid in decision-making within the company using both **R** and **Excel**

Teaching Assistant

University of Toronto

Aug. 2021 – Present

Mississauga, ON

- Facilitated weekly tutorials with **30+** students for several math and statistics courses
- Created curated learning materials for each tutorial and offered assistance outside of class to ensure student success
- Supervised both lectures and discussion boards to provide students with answers to their questions in real-time
- Marked over **1000** assessments from term tests to assignments, providing detailed feedback to each student

Undergraduate Research Assistant

University of Toronto

May 2021 – Aug. 2021

Mississauga, ON

- **1 of 2** research positions awarded by **NSERC** to students in the Mathematics and Computational Sciences department with **outstanding** academic records
- Responsible for the simulation of various algorithms and goodness-of-fit tests while also documenting the results, coded in **R**
- Peer edited and co-authored final publication of the research's findings

PROJECTS

Research Paper | *R, TidyVerse, LaTeX*

<https://www.mdpi.com/1099-4300/24/11/1579>

Oct. 2022

- This paper aims to test the validity of a proposed model against data containing observations who did not participate for the entire duration of an experiment
- Created a script in **R** to simulate right-censored data and fit models from, while also running goodness of fit tests to assess the performance of the paper's algorithms
- Applied the results of the research in a practical setting by running analyses on real-world right censored datasets

Image Identifier | *Python, scikit-learn, Matplotlib, Git*

Oct. 2022 – Dec. 2022

- Implemented an **ensemble model** in **Python** capable of identifying image labels with **86%** accuracy based on responses from a survey
- Completed necessary data chain (exploration, processing, cleaning, splitting) using **Pandas & NumPy** to demonstrate good machine learning practices before building the model
- Built and trained the model using **scikit-learn** and documented performance using **Matplotlib**

VIX Index Analysis | *R, TidyVerse, Jupyter Notebooks*

Jan 2022 – Apr. 2022

- Performed an analysis on the stock market and VIX over a certain time period in order to observe any trends as well as fit a model for prediction
- Utilized various time series libraries in **R** like **TSA**, **TidyVerse**, **lubridate** to carry out the analysis and employ theoretical tests along the way to validate decisions about the model

TECHNICAL SKILLS

Languages: Python, R, SQL, HTML/CSS, LaTeX, Java, Excel VBA

Developer Tools: Git, VS Code, Jupyter Notebooks, Rstudio, PyCharm, Eclipse, Excel

Libraries/Frameworks: Pandas, NumPy, Matplotlib, scikit-learn, Selenium, TidyVerse, R Markdown