

# Mark Asuncion

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## TECHNICAL SKILLS

**Languages:** Python, R, SQL (MySQL), SAS, BASH

**Software:** Git, Power BI, SQL Server Management Studio, Excel, Salesforce, Anaconda, RStudio

**Libraries:** Pandas, NumPy, PyTorch, scikit-learn, matplotlib, Selenium, TidyVerse, ggplot2, R Markdown, R Shiny, Quarto

## EDUCATION

### University of Toronto

*Master's of Science in Biostatistics, Artificial Intelligence and Data Science Focus*

- Ran weekly tutorials and marked **1000+** assessments for several math and stats courses as a **Teaching Assistant (TA)**

### University of Toronto

*Honours Bachelor of Science in Applied Statistics, Minor in Mathematics*

- Cumulative GPA - **3.91/4.00 (high distinction)**, recognized on Dean's List **4** times

**Coursework:** Regression Analysis, Bayesian Methods, Experimental Design, Machine Learning, Databases

## WORK EXPERIENCE

### Machine Learning Researcher

Oct. 2024 – Present

*Princess Margaret Cancer Centre | Department of Biostatistics*

*Toronto, ON*

- Implemented **reinforcement learning** model using **PyTorch** to recommend sleep schedules for improved mental health
- Analyzed **thousands** of observations from high-throughput data, writing **BASH** scripts to automate data pre-processing
- Performed **model tuning and feature engineering** using key metrics like average reduction in depressive symptoms

### Business Analyst Intern

May 2024 – Aug. 2024

*Shoppers Drug Mart Specialty Health Network | Business Intelligence and Insights Team*

*Mississauga, ON*

- Queried for data in **SQL**, pulling from a **SalesForce CRM** housing **millions** of records tied to **Patient Support Programs**
- Leveraged **Power BI** to revamp **dashboards** built in **Excel** for **10+** programs, improving management of **data models**
- **Automated** weekly reports of **PAH** patients and their coverage breakdowns in **Python**, reducing turnaround time by **63%**
- Developed internal tool using **Power BI** that dynamically tracked employee bandwidth and emphasized team **KPIs**

### Business Analyst Intern

May 2022 – Aug. 2023

*Environment and Climate Change Canada | Data Ingest & Product Development Unit*

*Toronto, ON*

- Collaborated with multidisciplinary teams to interpret and write business documents, facilitating stakeholder communication
- Managed and performed **ad-hoc analysis** on large-scale weather datasets for **15+** clients using **Python** and **Excel**
- Quality assured outputs for **30+** networks across Canada, ensuring data specifications were met for products used globally

## PROJECTS & RESEARCH

### Writing Development Initiative (WDI) | Python, Pandas, NumPy, Git, Jupyter Notebooks

Jan. 2023 – May 2023

- Collaborated with professors as a **data analyst**, investigating comments left on assignments by TAs to assess quality of feedback
- Employed **thematic analysis** to derive meaningful insights about the writing habits of students, consolidating key observations into a comprehensive report using **Jupyter Notebooks**
- Performed data cleaning and processing using **Python** scripts to parse and **automatically categorize** over **1500** comments, reducing manual assignment by **71%**

### Arts-Based Stats Web App | R, R Shiny, Git

Jan. 2023 – Apr. 2023

<https://gmasuncion.shinyapps.io/ArtBasedStatisticsSurveyWebpage/>

- Conducted an analysis on student perceptions regarding the efficacy of arts-based methodologies in teaching statistics
- Developed an interactive **data visualization** and analysis tool using **R Shiny** to output the findings of the research
- Created interactive visualizations that allowed users to dynamically manipulate variables, enhancing data comprehension
- Presented the app to an audience of **40+** statisticians at the **Joint Statistical Meetings (JSM)** hosted by ASA

### NSERC Undergraduate Student Research Award | R, TidyVerse, LaTeX

May 2021 – Oct. 2022

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

- Awarded **1 of 2** prestigious **NSERC (Natural Sciences and Engineering Research Council of Canada)** scholarships in recognition of academic excellence and research potential
- Conducted cutting-edge research under the mentorship of faculty, focusing on **model checking** with right-censored data
- Affirmed the paper's findings by **simulating** algorithms in **R** and building models from **100+** records of cancer data
- Published the research paper in a reputable peer-reviewed journal as a co-author, gathering over **1100** views from users