Jose Avilez

226-505-0997 | jlavilez@uwaterloo.ca | linkedin.com/in/jose-luis-avilez/ | github.com/jlavileze

Education

University of Waterloo — Waterloo, ON
Master of Mathematics in Statistics, GPA: 96% — *Sep. 2020 – Present*

University of Waterloo — Waterloo, ON
Bachelor of Mathematics in Mathematical Finance, Minor in Pure Mathematics, GPA: 94% — *Jan. 2017 – Apr. 2020*

Universidad Peruana Cayteno Heredia — Lima, Peru
Former MD student — *Mar. 2014 – Jul. 2015*

Academia

Graduate Teaching Assistant — September 2020 – Present
University of Waterloo — *Waterloo, ON*

- Teaching, office hours, and marking for an assortment of undergraduate statistics courses.

Undergraduate Research Assistant — May 2019 – Aug. 2019
University of Waterloo — *Waterloo, ON*

- Researched amenable groups and wrote essay titled *"Functional Analysis and Amenability: A Gentle Expedition"*.
- Talks: Approximation by neural networks; Haar measures; Cardinality of invariant means on amenable groups.

Research Assistant — May 2016 – Dec. 2016
Universidad Peruana Cayetano Heredia — *Lima, Peru*

- Designed an automated thesis registry database, which doubled the rate of satisfactory peer-review responses.
- Designed and implemented the faculty's research integrity and anti-plagiarism rules and policies.

Industry Experience

Quantitative Developer — Sep. 2019 – Aug. 2020
GWN Capital Management — *Toronto, ON*

- Built fixed income analytics suite for pricing, risk management, time series analysis, and dimensionality reduction.

Insurance Modelling and Analytics Specialist (Co-op) — Sep. 2018 – Dec. 2018
Oliver Wyman — *Toronto, ON*

- Implemented and adapted portfolio optimization algorithms to perform effectively in constrained solution spaces.
- Awarded co-op prize for research in automatic differentiation for asset and liability sensitivity computations.
- Extended OW's Atlas codebase by adding a Monte Carlo pricing engine for bonds, swaps, and options.

Statistical Data Scientist (Co-op) — Jan. 2018 – Apr. 2018
Capital One — *Toronto, ON*

- Deployed a C-Python extension for variable level monitoring, which yielded a 400x speed boost over benchmarks.
- Built tree-based machine learning models to predict delinquency risk, outperforming benchmark GLM models.

Junior Data Scientist (Co-op) — May. 2017 – Aug. 2017
Flipp — *Toronto, ON*

- Constructed GLMs and hypothesis tests to explain and predict user behaviour in Flipp's shopping app.
- Developed easy-to-us data visualization dashboards for business and executive teams to report key KPIs.

Miscellaneous

Spoken Languages: English, Spanish
Programming Languages: Python, R, SQL, C#, C
Libraries and Frameworks: Pandas, NumPy, Matplotlib, PyTorch, Keras, H2O
Awards: International OGS Scholarship, UW Pure Mathematics Silver Medal, CMS Poster Prize
Publications: Google Scholar Profile