Gian Carlo Diluvi M.

Contact

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Education

The University of British Columbia   2021–Present
Doctor of Philosophy (PhD) in Statistics

Supervisors: Dr. Trevor Campbell and Dr. Benjamin Bloem-Reddy.

The University of British Columbia   2019–2021
Master of Science (MSc) in Statistics

Thesis: *Locally-Adaptive Boosting Variational Inference.*
Supervisors: Dr. Trevor Campbell and Dr. Benjamin Bloem-Reddy.
GPA: 94.2% out of 100%. (4.0 out of 4.0.*)

Instituto Tecnológico Autónomo de México   2013–2017
Bachelor of Science (BSc) in Applied Mathematics, *summa cum laude*

Thesis: *Bayesian Design of Experiments for Generalized Linear Models.*
Supervisor: Dr. Ernesto Barrios-Zamudio.
GPA: 96.9% out of 100%.** (3.96 out of 4.0.*)

*Converted using Scholaro.
**Original scale in points out of 10; converted by calculating percentage out of 100%.

Research Positions

The University of British Columbia   2021–Present
Research Assistant, Department of Statistics
Supervisors: Dr. Trevor Campbell and Dr. Benjamin Bloem-Reddy

Doctoral research focused on scalable Bayesian and causal inference.

The University of British Columbia   2020–Present
Research Assistant, Department of Statistics
Supervisor: Dr. Nancy Heckman

Research focused on improving introductory Bayesian instruction and on assessing interactive simulations in development via think-aloud sessions with students.

The University of British Columbia   2020–2021
Research Assistant, Department of Statistics
Supervisors: Dr. Trevor Campbell and Dr. Benjamin Bloem-Reddy

Master's research project that combined ideas from MCMC and boosting variational inference to develop novel algorithms for Bayesian inference.

Teaching Positions

The University of British Columbia   2021–Present
Teaching Assistant Trainer, Department of Statistics

Organize and facilitate the yearly TA orientation workshop for incoming TAs. Supervise and give 1-on-1 feedback to new TAs.

THE UNIVERSITY OF BRITISH COLUMBIA   2019–Present
Teaching Assistant, Department of Statistics
- Spring 2022: STAT 450 Case Studies in Statistics.
- Spring 2020: STAT 302 Introduction to Probability.
- Spring 2020: STAT 203 Statistical Methods.
- Fall 2019: STAT 200 Elementary Statistics for Applications.

INSTITUTO TECNOLÓGICO AUTÓNOMO DE MÉXICO   2017
Undergraduate Faculty Member, Department of Mathematics
Answer questions from Applied Mathematics undergraduate students.

INSTITUTO TECNOLÓGICO AUTÓNOMO DE MÉXICO   2016
Teaching Assistant, Department of Statistics
- Spring 2016, Fall 2016: EST-14102 Probability II.

PUBLICATIONS

SUBMITTED FOR REVIEW   *First Author
- <u>G. C. Diluvi</u>*, S. Isberg*, B. Dunham, N. Heckman, and M. Lee. **Using online student focus groups in the development of new educational resources** .
  (Submitted June 2022.)
- <u>G. C. Diluvi</u>*, B. Dunham, N. Heckman, M. Lee, and R. Lourenzutti. **Structured, interactive resources for teaching Bayesian inference**.
  (Abstract accepted February 2022; article submitted April 2022; article accepted July 2022.)

NON-REFEREED PUBLICATIONS
- <u>G. C. Diluvi</u> (2021). **Locally-adaptive boosting variational inference**. *University of British Columbia*. (MSc thesis.)
- <u>G. C. Diluvi</u> (2019). **How does it make you feel?** *Significance, 16*(3), 26–29.
- <u>G. C. Diluvi</u>*, M, Mendoza, and G. Orantes (2018). **Statistics in the 2018 Mexican general election quick counts**. *Laberintos e Infinitos, 48*, 29–37.
- M. Mendoza, <u>G. C. Diluvi</u>, and G. Orantes (2018). **Description of the Bayesian estimation model, stratification design, and sample size for Chiapas.**. *Scientific, logistic, and operational criteria for the Quick Counts and sampling design protocol*, 43–45 and 53–67.

CONFERENCES

TALKS
- 2021 UBC Statistics Seminar: *Locally-adaptive boosting variational inference.*
- 2020 UBC Social Exposome Cluster Resarch Day: *Reliable statistical inference with complex, heterogeneous data.* (Prize for best master's presentation.)
- 2019 Winter SFU/UBC Joint Statistics Seminar: *Quick counts in the 2018 Mexican general election.*
- 2018 ITAM's Mathematics Colloquium, Mexico City: *Statistics behind the 2018 Mexican general election quick counts.*
- 2017 ITAM's Mathematics Colloquium, Mexico City: *Generalized linear models.*

ORGANIZED
- 2021 SFU/UBC Joint Statistics Seminar (co-organizer).
- 2019–2021 weekly graduate student-run seminars at UBC Statistics (co-organizer).

CHAIRED
- 2021 WNAR of IBS Distinguished Speaker Q&A with Dr. Michael I. Jordan (co-chair).

DISTINCTIONS AND AWARDS

- 2021–2024 UBC Four Year Doctoral Fellowship.
- 2021 UBC Faculty of Science Killam Teaching Assistant Award nomination.
- 2021 UBC Department of Statistics Teaching Assistant Award.
- 2020 UBC SEC Research Day: prize for best master's presentation.
- 2019 XXIV ITAM Alumni Research Awards: Honorable Mention, applied math category.

PROFESSIONAL EXPERIENCE

PFIZER INC   2016–2019
Business Analytics
Intern (2016), Analyst (2017), Coordinator (2018), Sr. Coordinator (2019)

I developed data-driven analyses and presented them to marketing directors with no formal statistical training. My last two projects were leading the development of a company-wide dashboard used in monthly in-depth business reviews and training a random forest model to identify potentially loyal physicians.

MEXICO'S NATIONAL ELECTORAL INSTITUTE (INE)   2018
Research Assistant

The INE formed a nine-member and twelve-assistant committee to carry out quick counts for the 2018 Mexican general election. I worked as committee member Dr. Manuel Mendoza's research assistant. We improved his original Bayesian model, defined the sampling design used in Chiapas, and I developed the code for generating the official report for the Presidential election.

OTHER RELEVANT EXPERIENCE

THE UNIVERSITY OF BRITISH COLUMBIA   2022–Present
Graduate Student Representative, Department of Statistics

THE UNIVERSITY OF BRITISH COLUMBIA   2020–Present
Statistical Consultant, Department of Statistics

Projects that I have worked in as a statistical consultant at UBC:
- 2022 The use of the R sounds in the variety of Portuguese spoken by Santomean immigrants in Portugal (*mentor*).
- 2021 The right to Vancouverism: social reproduction placemaking in the revanchist city.
- 2021 An investigation on the role of urban neighborhood green spaces in mitigating stress inflicted due to the COVID-19 isolation.
- 2021 Sample size calculations and statistical analysis of key e-commerce metrics.
- 2020 Functional consequences of TMEM30A mutations in the survival of lymphoma.
- 2020 The sporting history and athlete development pathway of Canadian university athletes.
- 2020 Humane pigeon pest control management: Ovocontrol P at TransLink Skytrain stations.
- 2020 Navigational strategies in rats that lack newborn neurons.
- 2020 An analysis on commercial real estate property assessment and property tax in BC.
- 2020 Exploring the effect of environmental drivers on salmon condition during outmigration.

INSTITUTO TECNOLÓGICO AUTÓNOMO DE MÉXICO   2015–2017
Editorial Team Member, Laberintos & Infinitos
(ITAM's Mathematics' student journal)
Editor (2015–2016), Editor in Chief (2017)