

## CONTACT

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## EDUCATION

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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*.

Thesis 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%.

## ACADEMIC POSITIONS

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THE UNIVERSITY OF BRITISH COLUMBIA

2020–Present

**Research Assistant**, Department of Statistics and Department of Chemistry

Tri-agency-administered New Frontiers in Research Fund — Explore project

I am working with Drs. Trevor Campbell, Tao Huan, and Martin Guhn on a project which aims to integrate qualitative social determinants with quantitative environmental measurements to investigate their synergistic effects on child development. My tasks include helping with developing the statistical model as well as devising an efficient algorithm to train the model.

THE UNIVERSITY OF BRITISH COLUMBIA

2020–Present

**Research Assistant**, Department of Statistics

I am working under Drs. Benjamin Bloem-Reddy and Trevor Campbell on a research project that combines ideas from MCMC and boosting variational inference to develop a novel scalable algorithm for Bayesian inference.

THE UNIVERSITY OF BRITISH COLUMBIA

2020–Present

**Research Assistant**, Department of Statistics

I am working under Dr. Nancy Heckman in the Flexible Learning project, an initiative that brings together open and vetted resources to help promote the teaching and learning of introductory Statistics. My tasks include developing resources such as Shiny apps and activities, as well as organizing and analyzing the results of focus groups.

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 feedback to new TAs during their first labs.

THE UNIVERSITY OF BRITISH COLUMBIA  
**Teaching Assistant**, Department of Statistics

2019–2020

- STAT 302 Introduction to Probability.
- STAT 203 Statistical Methods.
- STAT 200 Elementary Statistics for Applications.

INSTITUTO TECNOLÓGICO AUTÓNOMO DE MÉXICO

2017

**Editor in Chief**, *Laberintos & Infinitos*

As editor in chief of *Laberintos & Infinitos*, ITAM's Mathematics' student journal, I led a 10-people team; during my tenure, three numbers were published and the fifteen-year anniversary of the journal was successfully celebrated.

INSTITUTO TECNOLÓGICO AUTÓNOMO DE MÉXICO

2017

**Undergraduate Faculty Member**, Department of Mathematics

The Undergraduate Faculty of the Department of Mathematics is made up of senior students of academic excellence who tutor and answer questions from younger students about any of the courses offered in the Applied Mathematics B.Sc.

INSTITUTO TECNOLÓGICO AUTÓNOMO DE MÉXICO

2016

**Teaching Assistant**, Department of Statistics

EST-14102 Probability II.

- Multivariate random variables and probability distributions.
- Sequences of random variables and types of convergence.
- Law of large numbers and Central Limit Theorem.

INSTITUTO TECNOLÓGICO AUTÓNOMO DE MÉXICO

2015–2016

**Editor**, *Laberintos & Infinitos*

## PUBLICATIONS

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- Diluvi, G. C. (2021). **Locally-adaptive boosting variational inference**. *University of British Columbia*. (MSc thesis.)
  - Diluvi, G. C. (2019). **How does it make you feel?** *Significance*, 16(3), 26-29.
  - Diluvi, G. C., Mendoza, M., and Orantes, G. (2018). **Statistics in the 2018 Mexican general election quick counts**. *Laberintos e Infinitos*, 48, 29-37.
  - Mendoza, M., Diluvi, G. C., and Orantes, G. (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

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### PRESENTATIONS

- 2021 UBC Statistics Seminar: *Locally-Adaptive Boosting Variational Inference*.
- 2020 UBC Social Exposome Cluster (SEC) Research Day: *Reliable statistical inference with complex, heterogeneous data*.
- 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).

## DISTINCTIONS AND AWARDS

- 2021–2024 UBC Four Year Doctoral Fellowship.
- 2021 UBC Department of Statistics Entrance Scholarship.
- 2021 UBC President’s Academic Excellence Initiative PhD Award.
- 2021 UBC International Tuition Award.
- 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.
- 2020 UBC International Tuition Award.
- 2019 UBC International Tuition Award.
- 2019 XXIV ITAM Alumni Research Awards: Honorable Mention, applied math category.
- 2013–2017 GPA in the top 1% of my undergraduate cohort.
- 2013–2016 ITAM 75% scholarship.

## OTHER ACTIVITIES

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THE UNIVERSITY OF BRITISH COLUMBIA 2020–2021

**Consultant**, Department of Statistics

Projects that I have worked in as a statistical consultant at UBC:

- 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.

THE UNIVERSITY OF BRITISH COLUMBIA

2020–Present

**Member**, Social Exposome Cluster

## PROFESSIONAL EXPERIENCE

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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.