

# Ameer Dharamshi

PHD STUDENT · BIOSTATISTICS

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## Education

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### University of Washington

PHD IN BIOSTATISTICS

• Advisor: Daniela Witten

Seattle, WA, USA

September 2022 - Present

### University of Toronto

MSC IN STATISTICAL SCIENCES

Toronto, ON, Canada

September 2019 - June 2020

### University of Waterloo

BMATH IN MATHEMATICS/CPA

• Minors in Statistics and Computer Science

Waterloo, ON, Canada

September 2013 - June 2018

## Professional Experience

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- 2022-Present **Graduate Research Assistant**, Department of Biostatistics, University of Washington
- 2020-2022 **Research & Data Consultant**, Global Education Monitoring Report, UNESCO
- 2021-2022 **Part-time Researcher**, Bayesian Demography Lab, University of Toronto
- 2018-2019 **Consultant**, Deloitte Canada

## Publications

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### PUBLISHED

- Dharamshi, A.**, Ngo, V., & Rosenthal, J. S. (2023). Sampling by divergence minimization. *To appear in: Communications in Statistics - Simulation and Computation*. Available from: <https://doi.org/10.48550/arXiv.2105.00520>.
- Dharamshi, A.**, Barakat, B., Alkema, L. & Antoninis, M. (2022) A Bayesian model for estimating Sustainable Development Goal indicator 4.1.2: School completion rates. *Journal of the Royal Statistical Society: Series C (Applied Statistics)*, 71(5), 1822–1864. Available from: <https://doi.org/10.1111/rssc.12595>.

### PREPRINTS

- Dharamshi, A.**, Neufeld, A., Motwani, K., Gao, L. L., Witten, D. & Bien, J. (2023). Generalized data thinning using sufficient statistics. *arXiv preprint*. Available from: <https://doi.org/10.48550/arXiv.2303.12931>.
- Dharamshi, A.**, Antoninis, M., Montoya, S. & Barakat, B. (2023). A Bayesian cohort model for estimating out-of-school rates and populations. *SocArXiv preprint*. Available from: <https://osf.io/preprints/socarxiv/sqwb2/>
- Neufeld, A., **Dharamshi, A.**, Gao, L. L., & Witten, D. (2023). Data thinning for convolution-closed distributions. *arXiv preprint*. Available from: <https://doi.org/10.48550/arXiv.2301.07276>.

### IN PREPARATION

- Dharamshi, A.**, Alexander, M., Winant, C. & Barbieri, M. (2023+). Jointly estimating subnational mortality for multiple populations.

## Scholarships & Awards

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- 2022 **Top Scholar Recruitment Award**, University of Washington
- Faculty of Arts and Science Doctoral Recruitment Award (Declined)**, University of Toronto

2013-2017 **Faculty of Mathematics Entrance Scholarship**, University of Waterloo

2013 **President's Scholarship of Distinction**, University of Waterloo

## Presentations

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### INVITED TALKS

2022

*Estimating SDG 4 Indicators with a Bayesian Modelling Framework: Completion and Out-of-School Rates*. 9th Annual Meeting of the Technical Cooperation Group on SDG4 Indicators (TCG): Joint EMIS and Surveys Working Group. (November)

*A Bayesian Cohort Model for Estimating SDG Indicator 4.1.4: Out-of-School Rates*. STAB Working Group, University of Washington. (November)

2021

*Estimating Out-of-School Rates*. Bayes Working Group, University of Massachusetts Amherst. (December)

*Out-of-School Rate Modelling*. 8th Annual Meeting of the Technical Cooperation Group on SDG4 Indicators (TCG): Household Surveys Working Group. (October)

*Adjusted Bayesian Completion Rates (ABC)*. Bayes Working Group, University of Massachusetts Amherst. (June)

### CONTRIBUTED PRESENTATIONS

2022

Dharamshi, A., Alexander, M., Winant, C. & Barbieri, M., A Bayesian Hierarchical Model for Jointly Estimating Subnational Mortality for Multiple Populations. Oral presentations:

- European Population Conference 2022, Groningen, Netherlands (presented remotely),
- 6th HMD Symposium, Paris, France,
- PAA Annual Meeting, Atlanta, USA (presented remotely).

2019

Dharamshi, A. & Zou, R. Y., CSEye: A Proposed Solution for Accurate and Accessible One-to-Many Face Verification. Poster:

- AAAI-2019 Student Abstract Tract, Honolulu, USA.

## Teaching Experience

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University of Toronto

Summer 2020 **STA 302: Methods of Data Analysis I**, Teaching Assistant

Winter 2020 **STA 238: Probability, Statistics and Data Analysis II**, Teaching Assistant

Fall 2019 **STA 237: Probability, Statistics and Data Analysis I**, Teaching Assistant

University of Waterloo

Summer 2015 **MATH 127: Calculus 1 for the Sciences**, Teaching Assistant

Fall 2014 **MATH 135: Algebra for Honours Mathematics**, Teaching Assistant

## Outreach & Professional Development

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### PEER REVIEW

Demographic Research

### COMMUNITY SERVICE

2022-Present **EDI Committee Member**, University of Washington

## Additional Information

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- Technical Skills: R/RMarkdown, Stan, Python, SQL, C/C++, MATLAB, Julia
- General Skills: LaTeX and Microsoft Office
- Languages: English (native), French (basic)
- Hobbies: reading, squash, tennis, skating, baking, board games