

## Christian T. Covington

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CONTACT INFORMATION	Department of Biostatistics Harvard University	Email: <a href="mailto:ccovington@g.harvard.edu">ccovington@g.harvard.edu</a> Website: <a href="https://ctcovington.github.io">https://ctcovington.github.io</a>
RESEARCH INTERESTS	Model misspecification and uncertainty, valid statistical inference in adaptive settings, formal data privacy, scientific reform	
EDUCATION	<b>Harvard University</b> , Cambridge, MA PhD, Biostatistics, September 2022 -  <b>University of Waterloo</b> , Waterloo, ON, Canada MMath, Computer Science, September 2020 - June 2022 Advised by Xi He and Gautam Kamath  <b>Cornell University</b> , Ithaca, NY, USA BA, Statistical Science, January 2014 - May 2016	
HONORS AND AWARDS	Graduate Excellence Award, 2020 - 2022 David R. Cheriton Graduate Scholarship, 2020 - 2022 Dr. Derick Wood Graduate Scholarship, 2020 - 2021 Cornell University Magna Cum Laude and Distinction in Statistical Science, 2016 Hunter R. Rawlings III Cornell Presidential Research Scholar, 2014 - 2016	
PAPERS IN PREPARATION	<b>Bayesian Model Criticism using Uniform Parameterization Checks</b> Christian Covington, Jeff Miller ISBA World Meeting 2024 (Forthcoming)	
PUBLICATIONS	<b>Unbiased Statistical Estimation and Valid Confidence Intervals Under Differential Privacy</b> Christian Covington, Xi He, James Honaker, Gautam Kamath Statistica Sinica: Special Issue on Data Privacy (TBA)  <b>Differences in patient perceptions of integrated care among black, hispanic, and white Medicare beneficiaries</b> Emilia J Ling, Molly Frean, Jody So, Maike Tietschert, Nancy Song, Christian Covington, Hassina Bahadurazada, Sonia Khurana, Luis Garcia, Sara J Singer Health Services Research (2021)  <b>Patient experiences of integrated care in Medicare accountable care organizations and Medicare Advantage versus traditional fee-for-service</b> Molly Frean, Christian Covington, Maike Tietschert, Hassina Bahadurzada, Jodi So, Sara J Singer Medical Care (2021)  <b>Invertible promoters mediate bacterial phase variation, antibiotic resistance, and host adaptation in the gut</b> Xiaofang Jiang, A Brantley Hall, Timothy D Arthur, Damian R Plichta, Christian T Covington, Mathilde Poyet, Jessica Crothers, Peter L Moses, Andrew C Tolonen, Hera Vlamakis, Eric J Alm,	

Ramnik J Xavier  
Science (2019)

**Variation in Patients' Perceptions of Integrated Care Among Medicare Beneficiaries By Level of Need**

Nancy Song, Molly Freen, Christian Covington, Maike Tietschert, Emilia Ling, Hassina Bahadurzada, Michaela Kerrissey, Mark Friedberg, Sara Singer  
AcademyHealth Annual Research Meeting (2019)

PROFESSIONAL  
EXPERIENCE

**Apple, Cupertino, CA**  
Summer Intern

**May 2021 - August 2021**

- Developed differentially private algorithms for product teams.

**Harvard University, Cambridge, MA**  
Research Fellow: Privacy Tools Project

**July 2019 - August 2020**

- Part of core development team for the [SmartNoise](#) Rust library.
- Created [software implementation](#) of and extended theoretical results for differentially private Snapping Mechanism.

**Broad Institute, Cambridge, MA**  
Associate Computational Biologist

**August 2018 - June 2019**

- Wrote computational pipelines for preparation and analysis of biological data, including RNA-Sequencing and CRISPR screens.
- Created centralized storage and [documentation](#) of lab's computational resources.
- Contributed to automated system for CRISPR repair template design.

**Harvard Laboratory for Systems Medicine, Cambridge, MA**  
Data Scientist

**July 2017 - August 2018**

- Contributed to R package [ehR](#) to assist in analyzing electronic medical record data.
- Built machine learning models for [research](#) on physician testing decisions.

**Harvard Business School, Boston, MA**  
Research Associate

**July 2016 - June 2017**

- Helped develop simulation for [research](#) into dynamic strategic interactions.