

## RESUME

Ritoban Kundu

3rd Year Phd Student

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### ACADEMIC DETAILS

Degree	Institute	Year	Percentage%
UMich Biostat	<i>Umich Biostatistics</i>	2021-23	4.0+
Master of Statistics (Honours)	<i>Indian Statistical Institute</i>	2019-21	88.5
Bachelor of Statistics(Honours)	<i>Indian Statistical Institute</i>	2016-19	83.9
Class XII(Cbse Board Exam)	<i>South Point High School</i>	2016	95
Class X(Cbse Board Exam)	<i>South Point High School</i>	2014	10.0(CGPA)

### FIELDS OF INTEREST

- Causal Inference, Electronic Health Records, Selection Bias, Mediation, Network Interference, Federated Learning

### TECHNICAL SKILLS

- **Languages** (R, Python, C), **Tools** (  $\text{\LaTeX}$ , MS Office(Power Point,Word,Excel))

### Internships and Experiences

- Mentor of Big Data Summer Institute, 2022 and 2023 for Infectious Disease Group and Machine Learning Group respectively
- GSRA under Prof. Bhramar Mukherjee and Prof. Peter Song
- Big Data Summer Institute, 2019, University of Michigan

### PUBLICATIONS AND PREPRINTS

1. Kundu, R., Shi, X., Morrison, J., Barrett, J., & Mukherjee, B. (2024). **A Framework for Understanding Selection Bias in Real-World Healthcare Data**. Journal of the Royal Statistical Society Series A: Statistics in Society (2024): qnae039.
2. Salvatore, M., Kundu, R., Shi, X., Friese, C.R., Lee, S., Fritsche, L.G., Mondul, A.M., Hanauer, D., Pearce, C.L. and Mukherjee, B., (2024). **To weight or not to weight? The effect of selection bias in 3 large electronic health record-linked biobanks and recommendations for practice** Journal of the American Medical Informatics Association (2024): ocae098.
3. Kundu, R., Datta, J., Ray, D., Mishra, S., Bhattacharyya, R., Zimmermann, L. and Mukherjee, B., (2023) **Comparative impact assessment of COVID-19 policy interventions in five South Asian countries using reported and estimated unreported death counts during 2020-2021**. PLOS Global Public Health, 3(12), p.e0002063.

4. Fritsche, L.G., Nam, K., Du, J., Kundu, R., Salvatore, M., Shi, X., Lee, S., Burgess, S. and Mukherjee, B., (2023). **Uncovering associations between pre-existing conditions and COVID-19 Severity: A polygenic risk score approach across three large biobanks.** PLoS genetics, 19(12), p.e1010907.
5. Salvatore, M., Purkayastha, S., Ganapathi, L., Bhattacharyya, R., Kundu, R., Zimmermann, L., ... & Mukherjee, B. (2022). **Lessons from SARS-CoV-2 in India: A data-driven framework for pandemic resilience.** Science Advances, 8(24), eabp8621.
6. \*Bhaduri, R., \*Kundu, R., Purkayastha, S., Kleinsasser, M., Beesley, L. J., Mukherjee, B., & Datta, J. (2022). \*- Co First Authors. **Extending the susceptible-exposed-infected-removed (SEIR) model to handle the false negative rate and symptom-based administration of COVID-19 diagnostic tests: SEIR-fansy.** Statistics in medicine, 41(13), 2317-2337
7. Bhattacharyya, R., Kundu, R., Bhaduri, R., Ray, D., Beesley, L. J., Salvatore, M., & Mukherjee, B. (2021). **Incorporating false negative tests in epidemiological models for SARS-CoV-2 transmission and reconciling with seroprevalence estimates.** Scientific reports, 11(1), 1-14.
8. Purkayastha, S., Kundu, R., Bhaduri, R., Barker, D., Kleinsasser, M., Ray, D., & Mukherjee, B. (2021). **Estimating the wave 1 and wave 2 infection fatality rates from SARS-CoV-2 in India.** BMC research notes, 14(1), 1-7.
9. Purkayastha, S., Bhattacharyya, R., Bhaduri, R., Kundu, R., Gu, X., Salvatore, M., ... & Mukherjee, B. (2021). **A comparison of five epidemiological models for transmission of SARS-CoV-2 in India.** BMC infectious diseases, 21(1), 1-23.
10. Zimmermann, L., Bhattacharya, S., Purkayastha, S., Kundu, R., Bhaduri, R., Ghosh, P., & Mukherjee, B. (2021). **SARS-CoV-2 infection fatality rates in India: systematic review, meta-analysis and model-based estimation.** Studies in Microeconomics, 9(2), 137-179.
11. Babu, G. R., Ray, D., Bhaduri, R., Halder, A., Kundu, R., Menon, G. I., & Mukherjee, B. (2021). **COVID-19 Pandemic in India: Through the Lens of Modeling.** Global Health: Science and Practice, 9(2), 220-228.

#### SOFTWARE PACKAGES

- R-package **SEIR-fansy**  
This R package fits Extended Susceptible-Exposed-Infected-Recovery (SEIR) Models for handling high false negative rate and symptom based administration of diagnostic tests.

#### AWARDS AND ACHIEVEMENTS

- Honorable Mention to Richard G.Cornell Fellowship at Department of Biostatistics, University of Michigan
- Prize Money awarded on the 5<sup>th</sup>, 6<sup>th</sup> and 7<sup>th</sup> Semester at the Indian Statistical Institute, Kolkata.

#### INTEREST AND HOBBIES

- Singing Indian Classical Vocal Music.
- Hiking and Camping in Mountains
- Photography
- Playing Badminton, Tennis, Squash and Down Hill Skiing
- Reading storybooks in English and Bengali
- Watching abstract and critical movies, plays and concerts.