

# SOUMIK PURKAYASTHA

E-mail: [soumikp@umich.edu](mailto:soumikp@umich.edu)

Phone: +1-734-881-5075

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## EDUCATION (in reverse chronological order)

- **University of Michigan, Dept. of Biostatistics** *September 2019 -*  
Graduate student research assistant and Ph.D. student. *Current GPA: 4.0+*
- **University of Michigan, Dept. of Biostatistics** *September 2019 - April 2021*  
Master of Science in Biostatistics. *GPA: 4.0+*
- **Indian Statistical Institute** *July 2017 - June 2019.*  
Master of Statistics, First Class. Specialisation: Biostatistics. *GPA: 4.0*
- **St. Xavier's College (Autonomous), Kolkata** *July 2014 - June 2017.*  
Bachelor of Science (Hons.) in Statistics, First Class. *GPA: 4.0*

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## PROFESSIONAL EXPERIENCE (in reverse chronological order)

- **Apple Inc., Cupertino, USA** *May 2021 - August 2021*  
*Statistical Analyst Internship*
- **Walmart Labs, Bangalore, India** *May 2018 - July 2018*  
*Statistical Analyst Internship*

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## COMPUTING SKILLS

- **Language: R** *Proficiency*  
*advanced*
- **Language: C++, Python and SQL** *intermediate*
- **Software: SAS and Minitab** *intermediate*

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## PUBLICATIONS (in reverse chronological order) <sup>1</sup>

2021

1. Salvatore, M.\*, **Purkayastha, S.\***, Ganapathi, L., Bhattacharyya, R., Kundu, R., Zimmermann, L., Ray, D., Hazra, A., Kleinsasser, M., Solomon, S. and Subbaraman, R. and Mukherjee, B. *Lessons from SARS-CoV-2 in India: A data-driven framework for pandemic resilience*. **Science Advances**, 8(24), 2022. [10.1126/sciadv.abp8621](https://doi.org/10.1126/sciadv.abp8621)
2. Bhaduri, R.\*, Kundu, R.\*, **Purkayastha, S.**, Kleinsasser, M., Beesley, L.J., Mukherjee, B. and Datta, J., *Extending the susceptible - exposed - infected - removed (SEIR) model to handle the false negative rate and symptombased administration of COVID19 diagnostic tests: SEIRfancy*. **Statistics in medicine**, 41(13), 2022. [10.1002/sim.9357](https://doi.org/10.1002/sim.9357)
3. Zimmermann, L., Bhattacharya, S., **Purkayastha, S.**, Kundu, R., Bhaduri, R., Ghosh, P. and Mukherjee, B. *SARS-CoV-2 Infection Fatality Rates in India: Systematic Review, Meta-Analysis and Model-Based Estimation*. **Studies in Microeconomics** 9(2), 2021. [10.1177/23210222211054324](https://doi.org/10.1177/23210222211054324)
4. **Purkayastha, S.**, Kundu, R., Bhaduri, R., Barker, D., Kleinsasser, M., Ray, D. and Mukherjee, B. *Estimating the wave 1 and wave 2 infection fatality rates from SARS-CoV-2 in India*. **BMC Research Notes** 14(262), 2021. [10.1186/s13104-021-05652-2](https://doi.org/10.1186/s13104-021-05652-2)
5. **Purkayastha, S.**, Bhattacharyya, R., Bhaduri, R., Kundu, R., Gu, X., Salvatore, M., Mishra, S. and Mukherjee, B. *A comparison of five epidemiological models for transmission of SARS-CoV-2 in India*. **BMC Infectious Diseases**, 533, 2021. [10.1186/s12879-021-06077-9](https://doi.org/10.1186/s12879-021-06077-9)

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<sup>1</sup>\* indicates equal contribution.

## 2020

6. Salvatore, M., Basu, D., Ray, D., Kleinsasser, M., **Purkayastha, S.**, Bhattacharyya, R. and Mukherjee, B. *A comprehensive public health evaluation of lockdown as a non-pharmaceutical intervention on COVID-19 spread in India: National trends masking state level variations.* **BMJ Open**, 10(12), 2020. [10.1136/bmjopen-2020-041778](https://doi.org/10.1136/bmjopen-2020-041778)
7. Giri, S., **Purkayastha, S.**, Hazra, S., Chanda, A., Das, I. and Das, S. *Prediction of monthly Hilsa (*Tenualosa ilisha*) catch in the Northern Bay of Bengal using Bayesian structural time series model.* **Regional Studies in Marine Science** 39, 2020. [101456: 10.1016/j.rsma.2020.101456](https://doi.org/10.1016/j.rsma.2020.101456)
8. Zhou, Y., Wang, L., Zhang, L., Shi, L., Yang, K., He, J., Zhao, B., Overton, W., **Purkayastha, S.**, and Song, P. *A spatiotemporal epidemiological prediction model to inform county-level COVID-19 risk in the United States.* **Harvard Data Science Review** Special Issue 1 (2020) [10.1162/99608f92.79e1f45e](https://doi.org/10.1162/99608f92.79e1f45e)
9. Tang, L., Zhou, Y., Wang, L., **Purkayastha, S.**, Zhang, L., He, J., Wang, F. and Song, P. *A Review of Multi-Compartment Infectious Disease Models.* **International Statistical Review** 88(2), 2020. [10.1111/insr.12402](https://doi.org/10.1111/insr.12402)
10. **Purkayastha, S.**, Salvatore, M. and Mukherjee, B. *Are women leaders significantly better at controlling the contagion during the COVID-19 pandemic?* **Journal of Health and Social Sciences** 5(2), 2020. [10.1101/2020.06.06.20124487](https://doi.org/10.1101/2020.06.06.20124487)
11. Ray, D., Salvatore, M., Bhattacharyya, R., Wang, L., Du, J., Mohammed, S., **Purkayastha, S.**, Halder, A., Rix, A., Barker, D., Kleinsasser, M., Zhou, Y., Bose, D., Song, P., Banerjee, M., Baladandayuthapani, V., Ghosh, P., Mukherjee, B. *Predictions, Role of Interventions, and Effects of a Historic National Lockdown in Indias Response to the COVID-19 Pandemic: Data Science Call to Arms.* **Harvard Data Science Review**, Special Issue 1 (2020). [10.1162/99608f92.60e08ed5](https://doi.org/10.1162/99608f92.60e08ed5)

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## AWARDS

- 2020 (a) University of Michigan, Department of Biostatistics - Richard G. Cornell Fellowship for outstanding academic performance.
- 2019 (a) University of Michigan, Michigan Institute of Data Science - Best project at Michigan Data Science Challenge.
- (b) Indian Statistical Institute - Sabyasachi Roy Memorial Gold Medal for the best Master's degree project.
- 2018 (a) Indian Statistical Institute - Scholarship for good academic performance.
- 2017 (a) Indian Statistical Institute - Scholarship funded by Government of India.
- (a) St. Xavier's College - Best Bachelor's degree dissertation.
- 2016 (a) Indian Science Congress Association - Poster Presentation Award.
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