Lovedeep Gondara

CONTACT INFORMATION

Data, Analytics, Reporting, and Evaluation
Provincial Health Services Authority
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RESEARCH AREAS

Machine Learning, Large Language Models, Differential Privacy in Machine Learning, Deep Learning, Decentralized Learning, Generative Models, Statistics.

WORK EXPERIENCE

Provincial Health Services Authority, Vancouver, BC Canada

Research Scientist **June, 2023 - Present**

- Lead the deep learning research for cancer registry operations.
- Special focus on the use and development of large language models for data capture.

British Columbia Cancer Agency, Vancouver, BC Canada

(Bio)Statistician/Data Scientist **June, 2013 - June, 2023**

- Design and analysis of clinical trials and retrospective studies using various models from statistics and machine learning.
- Design and implementation of interactive dashboards to serve models for visualizing trends, performance monitoring, predictions, etc.
- Develop and implement state-of-the-art machine learning and statistical models.
- Provide technical expertise regarding data architecture and data standards for the development and maintenance of databases to facilitate reporting and research.
- Coordinate internal and external data requests for planning and research.
- Participate in recruitment, selection, and training of junior data scientists, interns, and summer students.

Team Lead, Statistics **Dec, 2018 - Mar, 2021**

- Lead a team of statisticians and data scientists within cancer surveillance and outcomes, population oncology.
- Provide leadership to team members via technical expertise and the facilitation and demonstration of the principles of team work and collaboration.
- Manage all incoming projects and ensure deliverables by assigning the projects to and coordinating with different team members.

EDUCATION

Simon Fraser University, Burnaby, BC, Canada

Ph.D., Computer Science, 2022

University of Illinois, Springfield, Illinois, USA

M.S., Computer Science, 2015

Colorado State University, Fort Collins, Colorado, USA

Graduate coursework, Statistics, 2014

University of the Fraser Valley, Abbotsford, BC, Canada

Post-Baccalaureate certificate (Applied Statistics/Data Analytics), 2013

Punjab Technical University, Punjab, India

B.Tech, Computer Science, 2011

Honors and Awards

Travel award, Privacy Enhancing Technologies Symposium, 2023

Dean of Graduate Studies Convocation Medal, Simon Fraser University, 2023

Early Career Researcher award, IPVC, 2023

John Jambor Knowledge Fund award, British Columbia Cancer Agency, 2014, 2015, 2017, 2020, 2022

Travel award, International Society for Bayesian Analysis, 2022

Graduate Fellowship, Simon Fraser University, 2017, 2019

Travel award, NeurIPS 2019

Clark Wilson LLP Graduate Scholarship, 2019

NVIDIA GPU Grant, 2018

Travel award, Simon Fraser University, 2016, 2017, 2018

Alexander Graham Bell Canada Graduate Scholarship (CGS-D), 2018

Helmut & Hugo Eppich Family Grad School award, Simon Fraser University, 2017

Travel award, International Biometrics Conference, 2016

Publications

Most recent and relevant five, first-author publications in ML. For a complete list, please see the Google scholar link.

1. **Gondara, L.** & Wang, K. (2023, January). PubSub-ML: A Model Streaming Alternative to Federated Learning. In Proceedings on Privacy Enhancing Technologies, 2023.
2. **Gondara, L.**, Wang, K., & Carvalho, R. S. (2022, March). Differentially Private Ensemble Classifiers for Data Streams. In Proceedings of the 15th ACM International Conference on Web Search and Data Mining, WSDM 2022.
3. **Gondara, L.**, Carvalho, R. S., & Wang, K. (2021, October). Training Differentially Private Neural Networks with Lottery Tickets. In European Symposium on Research in Computer Security (pp. 543-562), ESORICS 2021. Springer, Cham.
4. **Gondara, L.**, & Wang, K. (2020, August). Differentially Private Small Dataset Release Using Random Projections. In Conference on Uncertainty in Artificial Intelligence (pp. 639-648), UAI 2020. PMLR.
5. **Gondara, L.**, & Wang, K. (2020, September). Differentially Private Survival Function Estimation. In Machine Learning for Healthcare Conference (pp. 271-291), MLHC 2020. PMLR.

Academic Service	Reviewer: SDM 18' 21' 22', ICML 20' 21' 22', EMNLP 20' 21', EACL 21', NeurIPS 20' 21' 22', ACL 19' 20' 21', CHIL 20' 21' 22', ICLR 20' 21' 22' 23', KDD 21' 22'
Programming	Python, R, SAS
Homepage	https://lovedeepgondara.com/
Google Scholar	https://goo.gl/tFuznH
GitHub	https://github.com/lgondara