

Hashan Fernando

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Research Interests

Topological Data Analysis, Epidemiology, Machine Learning, Explainable AI

Education

University of Tennessee , Knoxville, TN Ph.D. (Reading) Data Science and Engineering GPA.: 4.00 out of 4. Advisor: Dr. Adam Spannaus	2022 – present
University of Peradeniya , Sri Lanka M.S. Data Science GPA: 3.75 out of 4.	2020 – 2022
University of Peradeniya , Sri Lanka B.Sc. Statistics and Operations Research GPA: 3.06 out of 4.	2015 – 2018

Experience

Graduate Research Assistant Advanced Computing in Health Sciences Section, Oak Ridge National Laboratory , Oak Ridge, TN • Geospatial study of opioid overdose risk in USA: Designing algorithm to identify spatial patterns using Topological Data analysis and Machine Learning	Aug 2022 – present
Graduate Research Assistant Department of Statistics and Computer Science, University of Peradeniya , Sri Lanka • Developed a smart seal and audio detection system for protecting steel-based cargo using IoT	Dec 2019 – Feb 2022
Data Scientist Intern VizuaMatix , Colombo, Sri Lanka • Developed a machine learning model to predict non-performing customers in a banking system • Developed a route optimization model for food distribution trucks to improve the efficiency and reduce operational costs	Jan 2019 – Jul 2019
Planning Intern MAS Holdings , Biyagama, Sri Lanka • Developed multiple VBA application for planning inventory	Oct 2018 – Jan 2019

Publications

- A. Deas, **H. Fernando**, A. Heidi, A. Kapadia, J. Trafton, A. Spannaus, V. Maroulas, "*Identifying Spatiotemporal Patterns in Opioid Vulnerability: Investigating the Links Between Disability, Prescription Opioids and Opioid-Related Mortality*", Preprint, 2024 [pdf]
- **H. Fernando**, A. Spannaus, A. Kapadia, "A Geospatial Study of Opioid Overdose Risk in Diverse Regions", Conference Proceedings for International Population Data Linkage Conference, vol. 9, no. 5, 2024 [pdf]

Awards

- Merit Award for MSc in Data Science
- Half Colors, Colors Awarding Ceremony 2017, University of Peradeniya, Sri Lanka

Presentations

- A Geospatial Study of Opioid Overdose Risk in Washington D.C Metropolitan Area, Interdisciplinary Association for Population Health Science Conference, St. Louis, MO, Sep 2024
- A Geospatial Study of Opioid Overdose Risk in Diverse Regions, International Population Data Linkage Network Conference, Chicago, IL, Sep 2024

Technologies

Languages: C, Java, Python, R

Technologies: RStudio, MINITAB, SPSS. Weka, Google Clous IoT, Arduino