Katrina Prantzalos

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https://github.com/KatrinaPrantzalos https://linkedin.com/in/katrina-prantzalos-249958b4

https://scholar.google.com/citations?user=dgWYKEkAAAAJ&hl=en&oi=ao

Education

Case Western Reserve University, Cleveland, OH **8/2020 - present**

Doctorate of Philosophy in Epidemiology and Biostatistics
Advisor: Dr. Satya Sahoo

Wayne State University, Detroit, MI **8/2018 - 12/2019**

Master of Science in Biomedical Engineering
Advisor: Dr. Liying Zhang

Eastern Michigan University, Ypsilanti, MI **8/2014 – 8/2018**

University Honors, Departmental Honors in Statistics and Psychology, and Highest Honors
Bachelor of Science
Major: Mathematics with a concentration in Statistics
Advisor: Dr. Andrew Ross
Thesis: A Machine-learning Exploration of Human Brain Connectome Data and Psychiatric Conditions
Major: Psychology
Advisor: Dr. Sylvia von Kluge
Thesis: The Effect of Post-ingestive Responses on Taste Preferences in Rats
Minor in Biology
Advisor: Dr. Cara Shillington

Manuscripts in Preparation and Under Review

Prantzalos K, Bauman R, Shafiabadi N, Gurski N, Miller J, Fernandez-BacaVaca G, Sahoo SS. Distinguishing Aberrant Brain Network States using Persistent Homology in a Machine Learning Workflow. (In progress)

Publications

Sahoo SS, Kobow K, Zhang J, Buchhalter J, Dayyani M, Upadhyaya DP, Prantzalos K, Bhattacharjee M, Blumcke I, Wiebe S, Lhatoo SD. Ontology-based feature engineering in machine learning workflows for heterogeneous epilepsy patient records. Scientific Reports, 2022.

Gupta DK, Prantzalos K, Hiller AL, Lobb BM, Chan K, Boyd J, Sahoo SS. Ontology-based, Real-time, Machine learning Informatics System for Parkinson Disease (ORMIS-PD). International Congress of Parkinson's Disease and Movement Disorders 2022 (poster), 2022.

Prantzalos K, Zhang J, Shafiabadi N, Fernandez-BacaVaca G, Sahoo SS. Epilepsy-Connect: An Integrated Knowledgebase for Characterizing Alterations in Consciousness State of Pharmacoresistant Epilepsy Patients. AMIA Annual Symposium Proceedings, 2022. Feb 21; 2021:1019-1028. PMID: 35308974; PMCID: PMC8861706.

Presentations

Prantzalos K, Zhang J, Shafiabadi N, Fernandez- BacaVaca G, Sahoo SS. Epilepsy-Connect: An Integrated Knowledgebase for Characterizing Alterations in Consciousness State of Pharmacoresistant Epilepsy Patients. AMIA Annual Symposium Proceedings, 2021.

Zhang J, Bauman R, Shafiabadi N, Gurski N, Fernandez-BacaVaca G, Sahoo SS. Characterizing Brain Network Dynamics using Persistent Homology in Patients with Refractory Epilepsy. AMIA Annual Symposium Proceedings, 2021.

Teaching Experience

Computing in Biomedical Health Informatics [Graduate], Teaching Assistant **Spring 2023**
Department of Population and Quantitative Health Sciences, Case Western Reserve University
Professor: Dr. Satya Sahoo

Honors & Awards

Robert T. Marshall Scholarship (Fall 2019) for academic merit at Wayne State University
Eng Helios – Graduate Tuition Scholarship (Winter 2019) for academic merit at Wayne State University
Dean's Scholarship – Engineering (Fall 2018) for academic merit at Wayne State University
Presented research at the 36th and 38th annual Undergraduate Symposium at Eastern Michigan University
Barry A. Fish Scholarship for presenting at the 36th annual Undergraduate Symposium at Eastern Michigan University
Regents Gold Full Tuition Scholarship at Eastern Michigan University
Honors Undergraduate Fellowship for a Machine Learning Exploration of Human Connectome Data research project

Professional Organizations and Societies

American Medical Informatics Association
Women in Machine Learning

Other Research & Work Experience

Graduate Research Assistant **8/2020 – present**
Mentor: Dr. Satya Sahoo
Contributed to drafting manuscripts, assisted in database schema creation and implementation, catalogued and processed previously collected data, evaluated components of patient registry user interface, and performed data analysis across multiple projects

Research Technician **2/2019 - 7/2020**
Mentor: Dr. Liying Zhang
Wrote statements of procedure for blood draw, serum and plasma processing, conducted serum and plasma protein biomarker analysis and documented procedure, managed biomarker related data, assisted in daily lab tasks pertaining to analysis of protein biomarkers of Traumatic Brain Injury, assisted with running finite element models of blast or blunt impact to the head/brain, assisted with data collection, management, and analysis for balance testing

Undergraduate Psychology Advising Services **2015 -2016**
Assisted students in determining schedules in accordance to Eastern Michigan University's requirements for a degree in Psychology

Market Research Analyst Intern, ISPOS RDA Group, Bloomfield Hills, MI **5/2015 - 8/2015 & 5/2016 - 8/2016**
Interpreted data and translating into actionable insights, worked with quantitative methodologies, data analysis and report checking, file organization, and comprehensive data cleaning to preserve data integrity

Skills

Python, R, Java, Matab, SAS, SQL, git, LATEX, HTML, CSS, JavaScript, Microsoft Office

Relevant Graduate-Level Coursework

Machine Learning, Introduction to Artificial Intelligence, Medical Robotics & Systems, Medical Imaging Systems, Quantitative Physiology, Design and Measurement in Population Health Sciences Research, Integrated Thinking in Population & Quantitative Health Sciences, Introduction to Population Health, Epidemiology: Introduction to Theory & Methods, Statistical Methods 1 & 2, Mathematical Modeling: Bioengineering, Database Systems, Medical Robotics & Systems, Medical Imaging Systems, Computer & Math Applications