GRADUATE SEMINAR

W. Madusha De Silva

A Novel Stacking-based Ensemble Learning Model for Cancer Diagnosis

MSC Student supervised by Dr. Andrei Volodin

Date: Nov 02, 2022
Time: 3.30-4.30 pm
Location: CL 305 and

https://uregina-ca.zoom.us/j/94125367372

Abstract:

According to the high variability among various breast cancer datasets, widely-used machine learning models are applied to breast cancer diagnosis. However, the robustness and generalization of these models to assist clinical diagnosis are debated recently. Therefore, a stacking-based ensemble learning model is proposed in this study. This model consists of a two-layer learning structure, and its classifier combination is determined by the proposed stacking method. This model will apply to three different breast cancer datasets including Breast Cancer Ultrasound (BCU), Wisconsin Breast Cancer (WBC), and Mammographic Mass (MM), and will evaluated using classification accuracy and robustness in this study. In this seminar, I will perform the feature selection method to identify relevant features and remove irrelevant and redundant features from three datasets. And I will evaluate some base models to construct the stacking model with a 10-fold cross-validation strategy.

University of Regina

Mathematics and Statistics