

Department of Statistics & Data Science

Colloquium Series

Fall 2019

Speaker: Dr. Morgan Wang

Title: An Automatic Intelligent Model Building System to Develop Products' Sequential Recommendation System

Date: Friday, November 15th, 2019

Time: 11:00AM – 12:00PM

Location: Technology Commons I, Room 102C

Abstract:

Automatic modeling system is in high demand. A typical automatic and intelligent modeling system needs to have five components: data exploration component, data preparation component, model building/validation/selection component, result automatic generation/data scoring component, and model understanding component.

This system has data preparation component that can fix data problems such as missing values, skewness, and high cardinality. In addition, this system has modeling component that can fine tune the model parameters to build a “better” model. Currently, it supports neural network, decision trees, gradient boosting, random forest and many regression algorithms. After the optimal model selected, the user can further test the model performance or use the selected model to score new data. This system also attempts to open the black box to allow the user to see some insight of the modeling results such as interaction among predictors, important predictors, how to alter predictors to change the predicted values.

This system has successful used on developing sequential production recommendation system. Instead of recommending one product to its' potential customer, this system can select an array of products and recommend these products to potential customers. Experiment results have shown that an average of six-fold increasing.

Notice to students: Please sign in at the event!