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*Credit default risk prediction with machine learning*

The credit default risk prediction can be considered as a binary classification problem. Hence machine learning models used for binary classification problems can be applied to credit default risk prediction as well. However, challenges remain. Dataset for credit default risk prediction is often highly imbalanced and incomplete. In this talk, we investigate the use of Random Forest and Neural Network for predicting credit default risk on a high dimensional dataset. The Random Forest model based on synthetic minority over-sampling technique (SMOTE) and a random search cross validation is employed on hyperparameters optimization. The neural network is ensembled with Adaptive boosting (Adaboost). The performances of these two approaches are interpreted in the talk. This is a joint work with Michael Chen and Hongmei Zhu