Predicting Length of Stay using Neural Networks on the MIMIC III Dataset

In this presentation we will explore the use of neural networks in predicting the total length of stay for patients with various diagnoses based on selected general characteristics. A prediction of whether their stay will be long, or short is given as of the time they leave the ICU unit. Our dataset is drawn from the MIMIC III data base with codes written in R and Postgress. We will briefly discuss Neural Networks and their unique features, talk about the characteristics of our dataset and motivate our question. We will present our accuracy scores and note that this is the only method in its field that covers all diagnoses.

The presentation is accessible to all and no special knowledge is required. I will also provide anybody interested with a "baby" Neural Network architecture written in R to use in any structured dataset.