

Grad Seminar

11/29/21



Join us on zoom Monday the 29th 6 pm!
Guest speaker will be Sheena Mogan

TITLE - Biomarker Discovery by Semi-Supervised Non-negative Matrix Factorization

ABSTRACT - The cancer death rate has fallen continuously from its peak in 1991 for a total decline of 31% because of improvements in early detection treatment. Cancer biomarkers are characteristics of the body that are indicative of cancer such as specific proteins that result from DNA mutations and gene rearrangements. They are analyzed and measured to detect signs of cancer, show how cells grow and die, and predict a patient's risk of developing cancer, or an event of cancer reoccurrence. Our work uses a machine learning technique called Non-negative Matrix Factorization (NMF) to mine biologically meaningful biomarkers from multiomic data by reducing the dimensionality of cross-platform datasets. We analyze the clustering that emerges from NMF to draw relationships between drugs and biomarkers.