1. Input Multi-omic Data

RNA-Seq Data
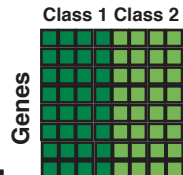Class 1 Class 2
Genes

CNV Data
Class 1 Class 2
Genes

SNP Data
Class 1 Class 2
Genes

Other Omic Data
Class 1 Class 2
Genes

+
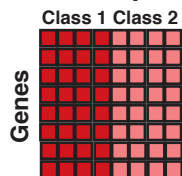
2. Filter Genes into Gene Sets

KEGG Reactome Biocarta
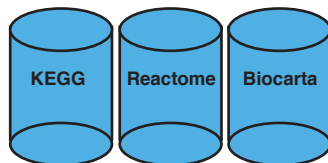
3. Cross Validate Gene Sets

Training
Test

1
2
⋮
k-fold

+
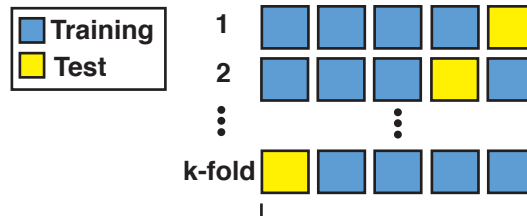
SVM Classifier

4. Output Results

Gene Set	AUC	p-val	FDR
KEGG Giioma	0.99	0.01	0.10
PID IL6 Pathway	0.96	0.02	0.20
Biocarta G1 Pathway	0.86	0.05	0.30
Reactome p53 Pathway	0.50	0.10	0.90