



GlioSurvML

A Machine Learning based Glioblastoma Survival Predictor

GlioSurvML is a webtool which predicts survival of GBM patients using Machine learning models built on gene expression profiles of tumor tissues. The model is built on several publicly available GBM gene expression datasets. The classifier is built to classify 2 survival groups of GBM –

- a) **Short-term survivors** who survive less than 12months
- b) **Long-term survivors** who survive more than 36 months

The predictor has performance accuracy = 80%, f1_score = 86%, sensitivity =86% and specificity of 62%. The model has been validated on external datasets and has shown promising performances. The result table contains

- **proba_STS** - The probability of sample falling into short-term survivors
- **proba_LTS** – The probability of sample falling into Long-term survivors
- **Classification result** – Short-term survivor / Long-term survivor

Sample_ID	Proba_LTS	Proba_STS	Classification_result
GSM1060034	0.457498	0.542502	1
GSM1060039	0.401957	0.598043	1
GSM1060040	0.448556	0.551444	1
GSM1060041	0.487287	0.512713	1
GSM1060042	0.548420	0.451580	0
GSM1060043	0.404865	0.595135	1
GSM1060047	0.498949	0.501051	1
GSM1060048	0.469189	0.530811	1
GSM1060049	0.483164	0.516836	1
GSM1060050	0.488576	0.511424	1
GSM1060051	0.450241	0.549759	1
GSM1060053	0.488322	0.511678	1

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