

## **“Radiomics feature prediction of survival in patients with high-grade gliomas”**

Group 14

### Abstract

Gliomas are tumors of the brain or spinal cord that are currently incurable, but are treatable depending on the phenotype of the specific glioma. The phenotype of certain gliomas can be determined by analysis of MRI scans. The objective of this project is to design a user-friendly, interactive application that can objectively analyze specified extracted radiomics features from MRIs of high-grade brain gliomas to predict patient survival for treatment evaluation. We have designed a random forest model built into an interactive app using Python. This model has been trained on publicly available glioma MRI images and it can classify an individual patient into short (<10 months), medium (10-15 months), or long (>15 months) overall survival time based on the patient's own MRI. With this program, we hope to assist physicians in developing a treatment plan for the high-grade glioma patients by aiding in their prognostic capabilities.