Marker Selection for the Detection of Trisomy 21

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The detection of fetal chromosomal abnormalities in the early stages of pregnancy is achieved with amniocentesis test or Chorionic Villus Sampling. However, such methods are invasive and they may carry risks for infections and for miscarriage. In this work, we propose a non-invasive procedure and we explore the relevance of the markers using the Generalized Matrix Learning Vector Quantization (GMLVQ). From the total number of 18 clinical examinations, we found the seven most relevant markers and we compare the performances between the models of the entire markers set and the seven markers that are suggested by GMLVQ. The results are in line with previous work that is found in the literature.