DT-SCALE DATA AT THE HEART OF THE TRANSFORMATION

ONCOLOGY RESEARCH: Machine Learning-based medical image analysis solution

1. CONTEXT

Analyze unstructured data (medical imaging) by combining them with different markers to transform diagnostic methods and the creation of new treatments.

2. REALIZATION

- Implementation of Spark/ mongoDB
- Implementation of Spark (Clustering) KMeans (Machine Learning MLlib library)
- Implementation of the spark-mongodb-hadoop connector for reading/writing to the MongoDB database
- Development of the Viewer (module with strong parameterization possibilities)
- Deployment on Microsoft Azure VM

LIVRABLES

- Import of medical images
- Calculation of image characteristics (features, entropy, ect.)
- Classification by unsupervised learning (machine learning)
- Viewer : Medical HMI
- Web search : patient image identification service
- Port to classified tiles in a reference base

mongoDB
Spark MLlib
Microsoft Azure