CETAQUA
WATER TECHNOLOGY CENTRE

Challenge:

Virtual sensing through Deep Learning and hyperspectral image analysis

14/09/2021

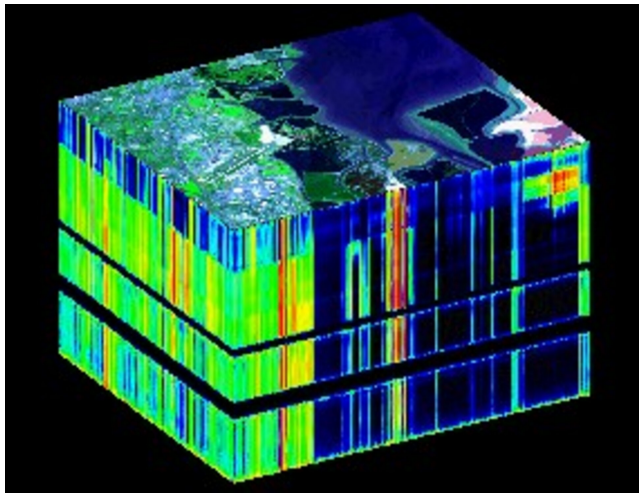
Challenge

Novel approaches on water quality monitoring: Deep Learning to develop virtual sensors

- Monitoring the quality of drinking water and ensuring full compliance of public regulations is the biggest concern for water operator, involved in a continuous sensorization and analysis effort.
- The changing dynamics of human behaviour are having a major impact on the water captured from rivers and reservoirs.
- Companies are looking for approaches to scale the sensing capabilities on new components without having to deploy massive amounts of hardware

- GOAL:
  - To build a repository of virtul sensors on emerging water components using Deep Learning classifiers on Hyperspectral Imaging

- Sensor data (a lot) on water parameters (temperature, PH, conductivity, turbidity….)
- Multi/hyperspectral imaging cameras
- Water analysis labs
- Deep Learning and chemometrics background
- Computing infrastructure



https://www.cheminformania.com/deep-chemometrics-deep-learning-for-spectroscopy/

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