Diabetes Management at Air Liquide Healthcare

- Diabetes: 425M adults affected worldwide
  - Type 1 diabetes: 10% The body does not produce insulin
  - Type 2 diabetes: 90% The body produces inefficient insulin

- Diabetes cannot be curated but can be managed
  - Provision of equipments
  - Educational programs
  - Remote monitoring
  - Personalized follow-up
  - Sharing patient data with doctors

Machine Learning can help for:
- Glucose-level prediction
- Insulin delivery control
- Diet recommendation

Glucose Level Prediction with Machine Learning

Patient-specific predictive model

Benchmarking Machine Learning Parameters for Glucose Level Prediction

Challenges related to glucose level prediction:
- No clear winner on the most suitable model
- Short term prediction is easy but has limited application
- Long validation time range leads to better forecast
- Prediction during night-time is harder than daytime

We are open for collaboration!
mehdi.rahim@airliquide.com