

1. Project: Data Analysis to Save the UK:

Apply new GPU-accelerated data manipulation and analysis skills with population-scale data to help stave off a simulated epidemic affecting the entire UK population:

- Use RAPIDS to integrate multiple massive datasets and perform real-world analysis.
- Pivot and iterate on your analysis as the simulated epidemic provides new data for each simulated day.

2. GPU-Accelerated Data Manipulation:

Ingest and prepare several datasets (some larger-than-memory) for use in multiple machine learning exercises later in the workshop:

- Read data directly to single and multiple GPUs with cuDF and Dask cuDF.
- Prepare population, road network, and clinic information for machine learning tasks on the GPU with cuDF.

3. GPU-Accelerated Machine Learning:

Apply several essential machine learning techniques to the data that was prepared in the first section:

- Use supervised and unsupervised GPU-accelerated algorithms with cuML.
- Train XGBoost models with Dask on multiple GPUs.
- Create and analyze graph data on the GPU with cuGraph.