Neural Generalized Ordinary Differential Equations with Layer-varying Parameters
Supplementary Material

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The experiments are implemented on GPU (Tesla V100 with 16GB-memory) in Department Biostatistics and Data Science, The University of Texas Health Science Center at Houston. To reproduce the results in the manuscript, we list the benchmark datasets and programming code files as follows.

1. Benchmark datasets.
   Both MNIST and CIFAR-10 are included in the *torchvision.datasets.*
   1.1. MNIST
       MNIST is directly loaded through function *torchvision.datasets.MNIST().*
   1.2. CIFAR-10
       CIFAR-10 is directly loaded through function *torchvision.datasets.CIFAR10().*
2. The necessary programming code can be found at https://github.com/Duo-Yu/Neural-GODE.
   2.1. Neural-ODE code
       - MNIST: odenet_mnist_spline_v0.ipynb (parameter: network = odenet)
       - CIFAR-10: odenet_cifar10_v2.ipynb
   2.2. ResNet code
       - MNIST: odenet_mnist_spline_v0.ipynb (parameter: network = resnet, number of residual blocks = 6)
       - CIFAR-10: odenet_cifar10_v2.ipynb (parameter: number of residual blocks = 20)
   2.3. Neural-GODE code
       - MNIST: neuralODE_Bspline_MNIST_v1.py
       - CIFAR-10: neuralODE_Bspline_cifar10_v4.py
   2.4. Code for Figure 2 (Figure 1 is the model architecture)
       visualize_parameter_estimation.ipynb