

Experiment Results

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1 Result

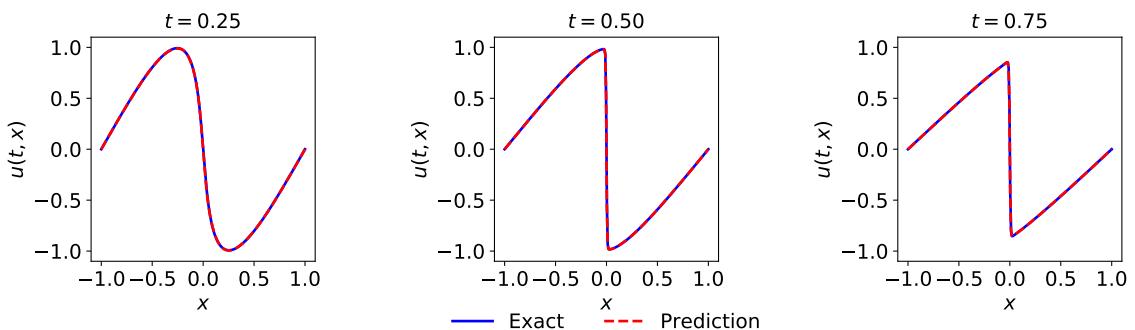
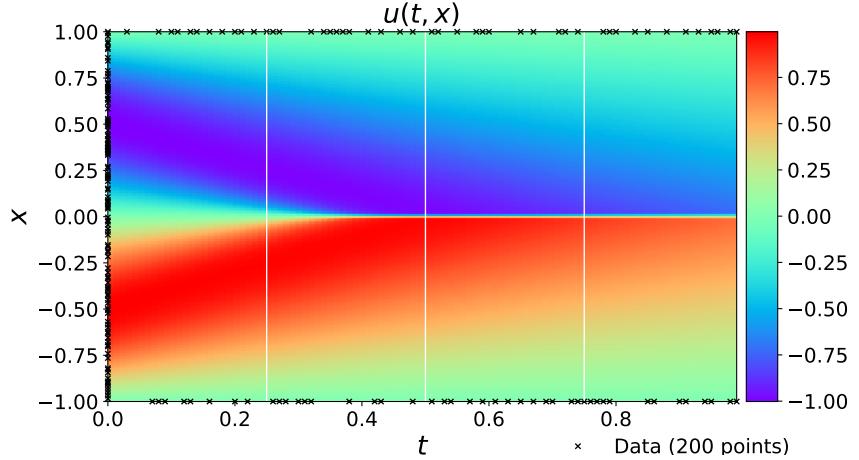
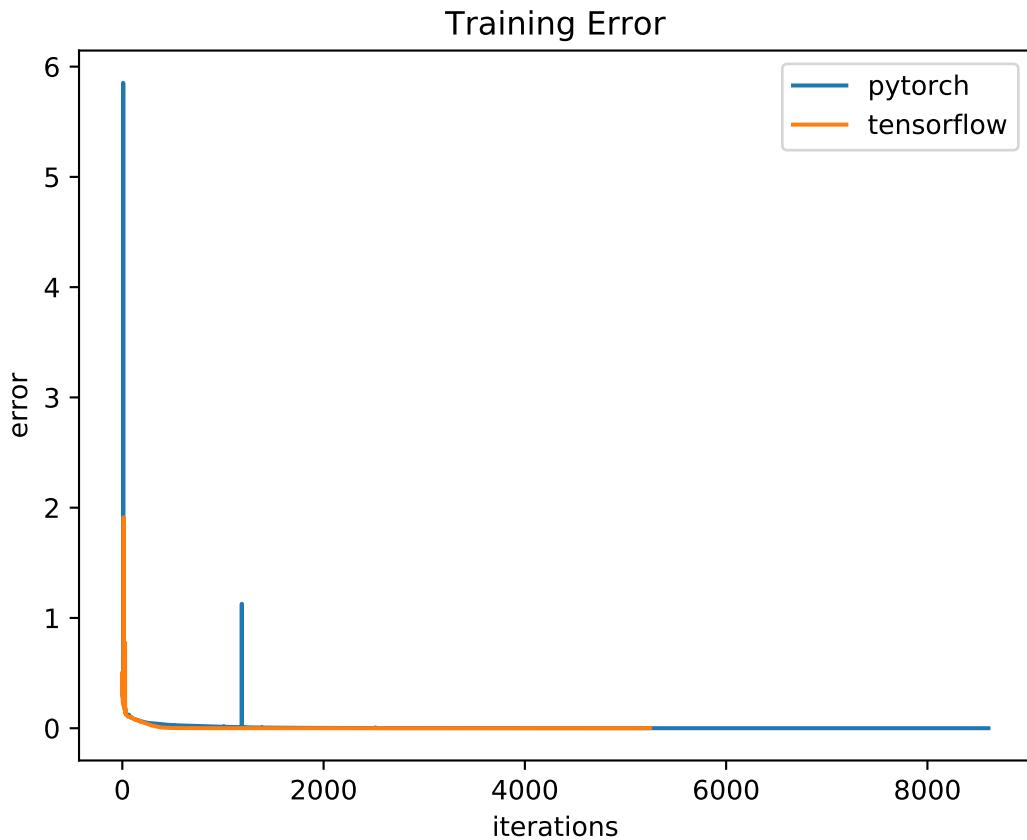


Figure 1: Burgers' equation: Top:Predicted solution $u(t, x)$ along with initial and boundary training data. We are using 10,000 collocation points. Bottom:Comparison of the predicted and exact solutions corresponding to the three temporal snapshots depicted by the white vertical lines. The relative \mathbf{L}_2 error of this case is 2.59e-03.

2 Training Error

$N_u = 200, N_f = 10000$



3 Test error

The architecture is fixed to 9 layers with 20 neurons per hidden layer.

$N_u \backslash N_f$	2000	4000	6000	8000	10000
100	7.8e-02	5.21e-02	5.73e-03	1.81e-03	5.03e-03
200	2.7e-01	3.85e-03	9.77e-04	1.13e-03	2.59e-03

Table 1: Pytorch

$N_u \backslash N_f$	2000	4000	6000	8000	10000
100	6.6e-02	2.7e-01	7.2e-03	2.2e-03	1.22e-03
200	1.8e-01	2.3e-03	8.2e-04	6.1e-04	5.27e-04

Table 2: Tensorflow