IFT6135 – Homework #1

Multilayer perceptrons - programming part

Name 1	Name 2	Name 3
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Problem 1

1.1 Building the Model

In the following sub-questions, please specify the model architecture (number of hidden units per layer, and the total number of parameters), the nonlinearity chosen as neuron activation, learning rate, mini-batch size.

The architecture of the model can be visualize in Fig.**??**. It is composed of two hidden layers with ReLU neuron activations,

```
model = torch.nn.Sequential(
          torch.nn.Linear(h0,h1),
          torch.nn.ReLU(),
          torch.nn.Linear(h1,h2),
          torch.nn.ReLU(),
          torch.nn.Linear(h2,h3))
```

$$
\begin{aligned}
[((asdf))] \\
\frac{\mathrm{d}x}{\mathrm{d}y} \\
\frac{\partial x}{\partial y} \\
\mathbf{x} \\
\hat{\mathbf{x}} \\
\mathrm{X}\boldsymbol{\Sigma}
\end{aligned}
\tag{1.1}
$$

1.1