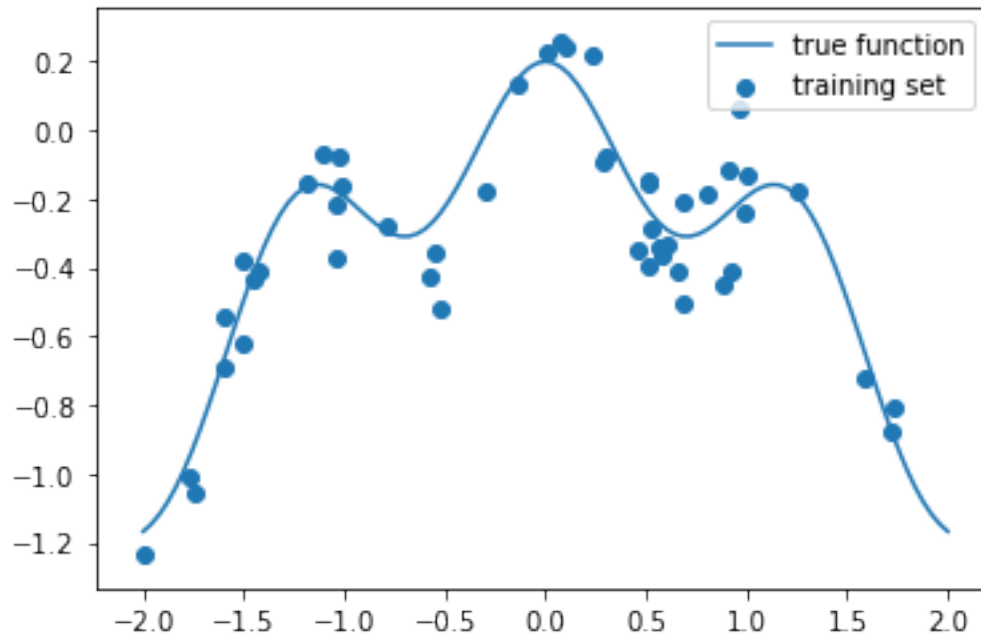


Linear_activations

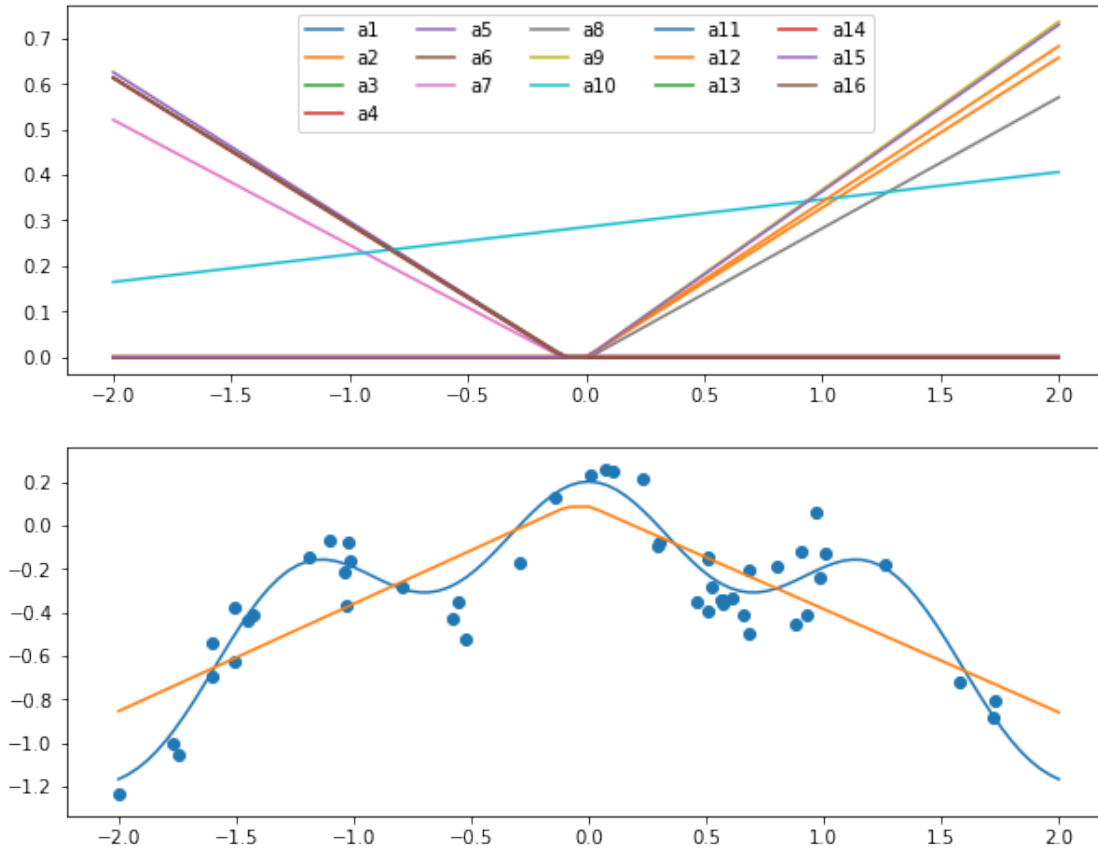
February 23, 2020

0.1 Example



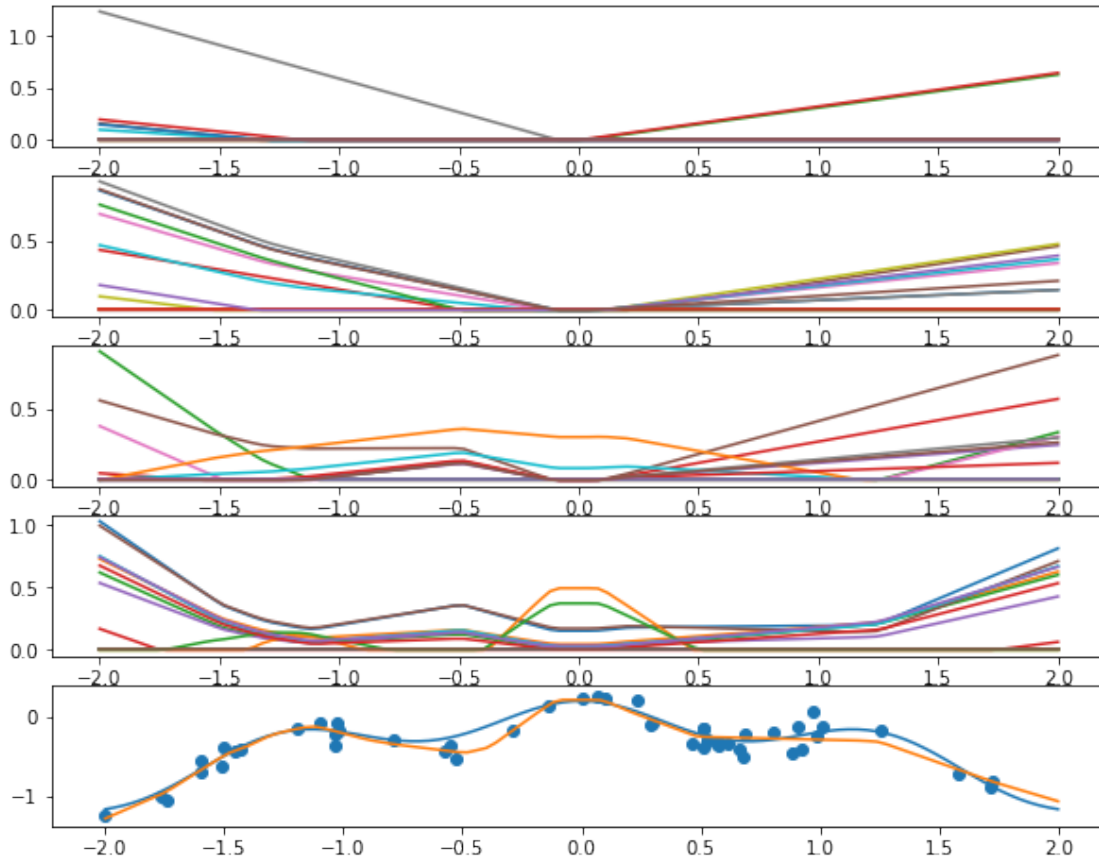
0.1.1 One hidden layer, 16 units per layer, relu activation

```
[0]: hidden_units = [16]
      np.random.seed(8746)
      b_init_seeds = np.random.randint(1, 1e6, size = sum(hidden_units)+1)
      w_init_seeds = np.random.randint(1, 1e6, size = sum(hidden_units)+1)
      model_1layer = fit_model_ex1(hidden_units, b_init_seeds, w_init_seeds)
      plot_layers(model_1layer, hidden_legend=True)
```



0.1.2 Four hidden layers, 16 units per layer, relu activation

```
[6]: hidden_units = [16, 16, 16, 16]
      np.random.seed(8746)
      b_init_seeds = np.random.randint(1, 1e6, size = sum(hidden_units)+1)
      w_init_seeds = np.random.randint(1, 1e6, size = sum(hidden_units)+1)
      model_3layers = fit_model_ex1(hidden_units, b_init_seeds, w_init_seeds)
      plot_layers(model_3layers, hidden_legend=False)
```



0.1.3 Four hidden layers, 16 units per layer, linear activation

```
[7]: hidden_units = [16, 16, 16, 16]
      np.random.seed(8746)
      b_init_seeds = np.random.randint(1, 1e6, size = sum(hidden_units)+1)
      w_init_seeds = np.random.randint(1, 1e6, size = sum(hidden_units)+1)
      model_3layers = fit_model_linear_g_ex1(hidden_units, b_init_seeds, w_init_seeds)
      plot_layers(model_3layers, hidden_legend=False)
```

