

# Assignment 3

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## Instructions

Please try all questions *yourself*. Ask one of the TAs or me, offline or in the class, in case you have doubts.

**Submission due 30-09-2023**

Growing NN Training	Grade:
<p>Consider your dataset that you built for Assignment 2. Use the same dataset to build a tree type growing neural network. At each node, learn a small neural network that tries to classify samples correctly, and child nodes are added to correct for misclassified samples. Explain how you will train the individual nodes while using a standard activation function, and then use the trained network as a node in a growing structure. Plot the loss function values and accuracies for training, validation, and test subsets, as the network is grown. Deduce a scheme to terminate growth to avoid overfitting. Please explain your approach and any assumptions in detail. Any missing detail may lead to hurdles in a fair evaluation. Use well designed figures to explain your approach and the growing network.</p>	<p><i>Faculty Comments</i></p>