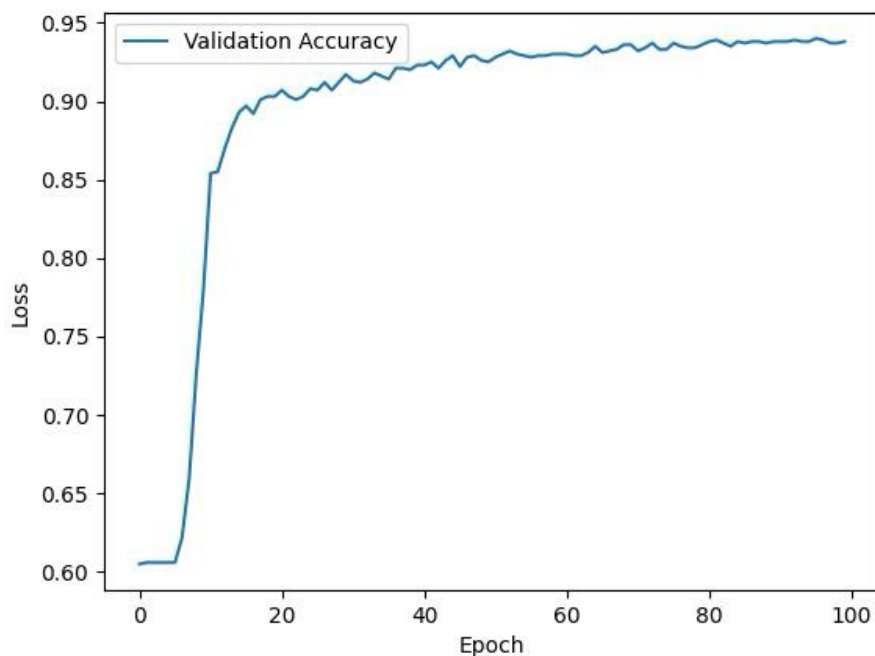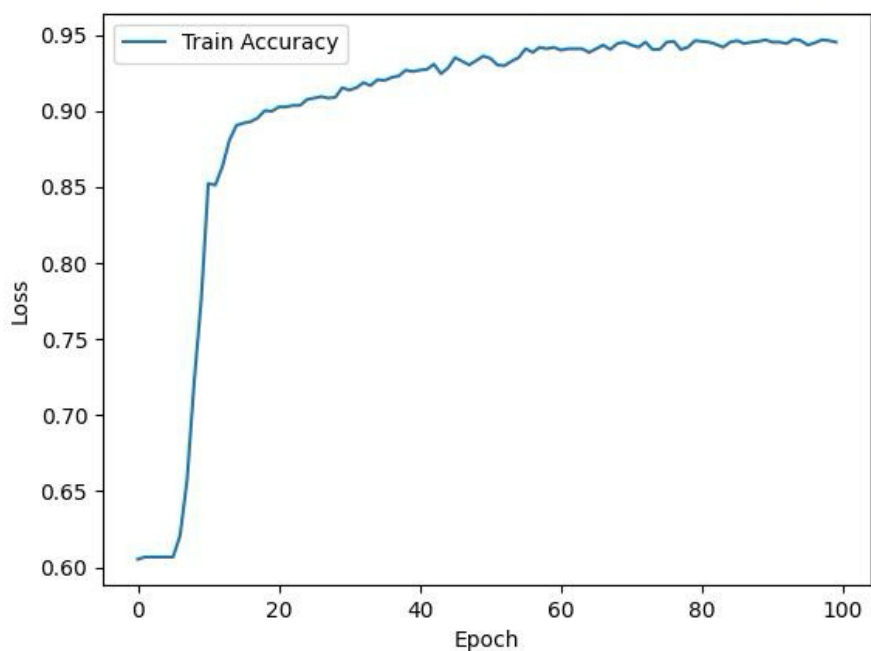# Spam data.

4601 data; 57 dim.
  ↳ word freq
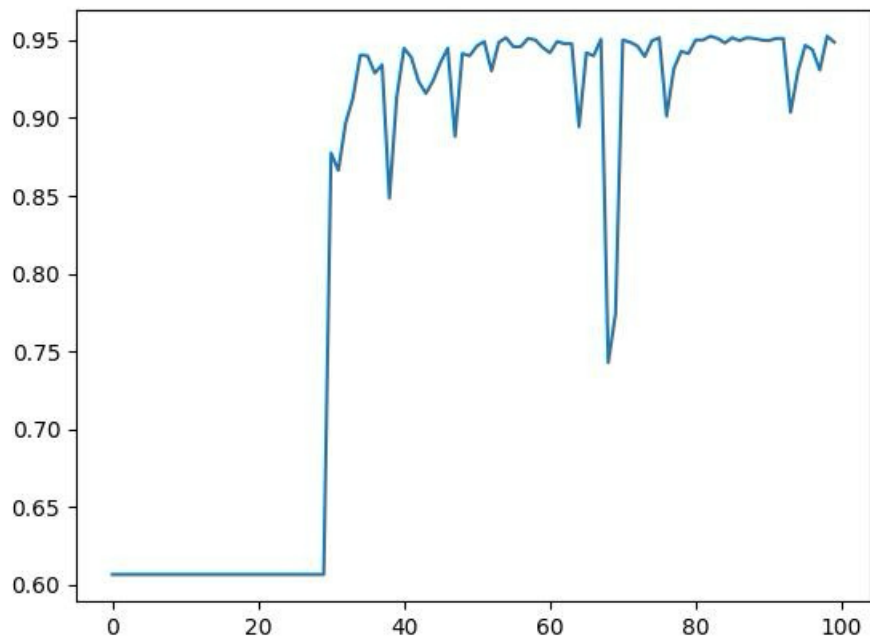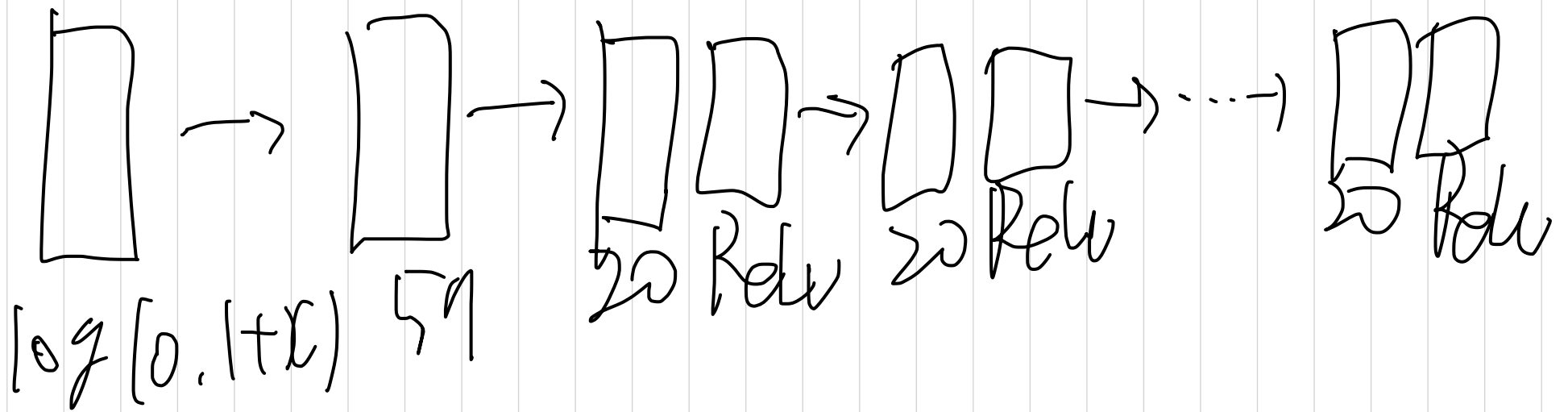   charac freq.

[-2065 (train)
  - 1000 (val)
  - 1536 (test)]

Model A. 1 hidden layer NN.

$[0,1][0_x|1+x]$ 57   20 ReLu   2 Softmax

Test error: 94%

Model B. "7 - hidden layer.

$$\square \rightarrow \square \rightarrow \square\square \rightarrow \square\square \rightarrow \cdots \rightarrow \square\square$$

$\log(0.1+x)$ 5n   20 Relu 20 Relu   20 Relu

Train

validation.