----- START PART 3e-basic: test character featyre extractor with varying n

Testing with n = 1

Read 3554 examples from polarity.train

Read 3554 examples from polarity.dev

77 weights

Official: train error = 0.4586381541924592, validation error = 0.4845244794597636

Testing with n = 2

Read 3554 examples from polarity.train

Read 3554 examples from polarity.dev

1541 weights

Official: train error = 0.3072594259988745, validation error = 0.40433314575126617

Testing with n = 3

Read 3554 examples from polarity.train

Read 3554 examples from polarity.dev

11419 weights

Official: train error = 0.0028137310073157004, validation error = 0.3159819921215532

Testing with n = 4

Read 3554 examples from polarity.train

Read 3554 examples from polarity.dev

49209 weights

Official: train error = 0.0, validation error = 0.28418683173888576

Testing with n = 5

Read 3554 examples from polarity.train

Read 3554 examples from polarity.dev

112740 weights

Official: train error = 0.0, validation error = 0.2737760270118177

Testing with n = 6

Read 3554 examples from polarity.train

Read 3554 examples from polarity.dev

171733 weights

Official: train error = 0.0, validation error = 0.2726505346088914

Testing with n = 7

Read 3554 examples from polarity.train

Read 3554 examples from polarity.dev

215791 weights

Official: train error = 0.0002813731007315701, validation error = 0.2706809229037704

Testing with n = 8

Read 3554 examples from polarity.train

Read 3554 examples from polarity.dev

245002 weights

Official: train error = 0.0005627462014631402, validation error = 0.2926280247608329

Testing with n = 9

Read 3554 examples from polarity.train

Read 3554 examples from polarity.dev

263091 weights

Official: train error = 0.0008441193021947102, validation error = 0.30979178390545864

The value of n that minimizes the validation loss is around 6 or 7. This is likely because this is the closest to the average number of characters per word.