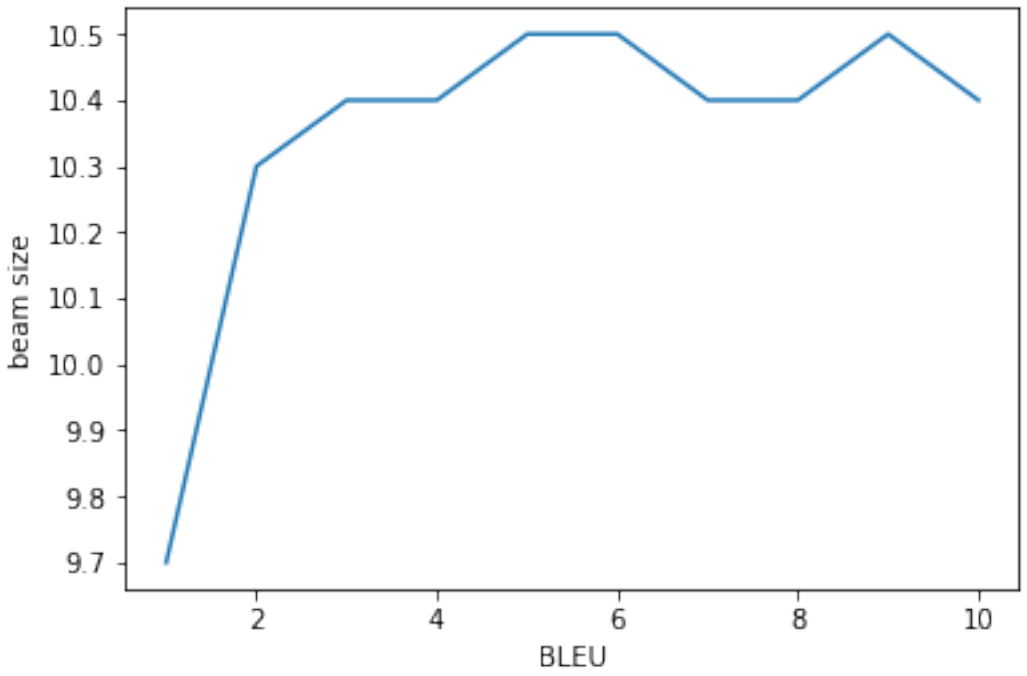
asg_5_ex_2

May 28, 2020

[6]:
```
from matplotlib import pyplot as plt
plt.xlabel("BLEU")
plt.ylabel("beam size")
plt.plot([1,2,3,4,5,6,7,8,9,10],[9.7,10.3,10.4,10.4,10.5,10.5,10.4,10.4,10.5,10.
↪4])
plt.show()
```



Comments:

- From beamsize 1 up to 6, the BLEU is increasing or at least staying the same
- From beamsize 7-10, BLEU decreases resp. starts to get values, which seem to be random between previous values.
- From 7-10, BLEU does not decrease significantly, but it either increases anymore.
- To me it looks like translation quality does not get improved any further from around beamsize 6 up.
- The really obvious increasings are between beamsize 1 - 5.

- What is interesting to see, is that the difference by only considering a second option, instead of only one -(sub)word is already increasing translation quality significantly from 9.7 to 10.3.
- These tests were done with a vocabulary of 4000 subwords.

Data:

use BPE	beam_size	BLEU
yes	1	9.7
yes	2	10.3
yes	3	10.4
yes	4	10.4
yes	5	10.5
yes	6	10.5
yes	7	10.4
yes	8	10.4
yes	9	10.5
yes	10	10.4