

Student Name: Guangyu Lin

Collaboration Statement:

Total hours spent: a week

I discussed ideas with these individuals:

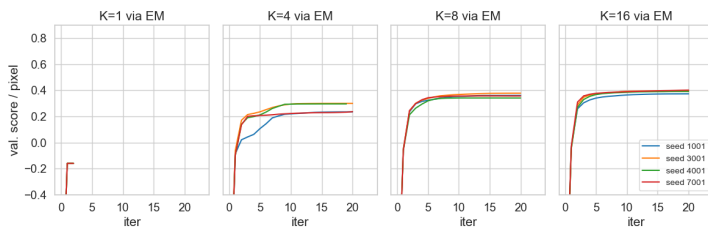
- Mingyang Wu
- TODO
- ...

I consulted the following resources:

- office hour with Professor and TA
- textbook
- ...

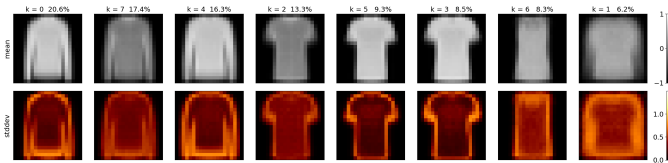
By submitting this assignment, I affirm this is my own original work that abides by the course collaboration policy.

1a



Based on the figure, it shows $K = 16$ did the best on this data.

1b



Based on the figure, we can see when $k = 0, 7, 4$, these are long-sleeve, which occupied 54.3% of the whole data. When $k = 2, 5, 3$, these are short-sleeve which occupied 31.1% of the entire data. When $k = 6$ and 1 , these are no-sleeve shirts which occupied 14.5% of the entire data.

1c

Validation set best score:

k=1	k=4	k=8	k=16
-0.15983452624738043	0.299843380786322	0.3780118438856484	0.4015227038356091

Test set best score:

k=1	k=4	k=8	k=16
-0.17355126553985542	0.2983713687292284	0.37948591434229706	0.4051776613675026