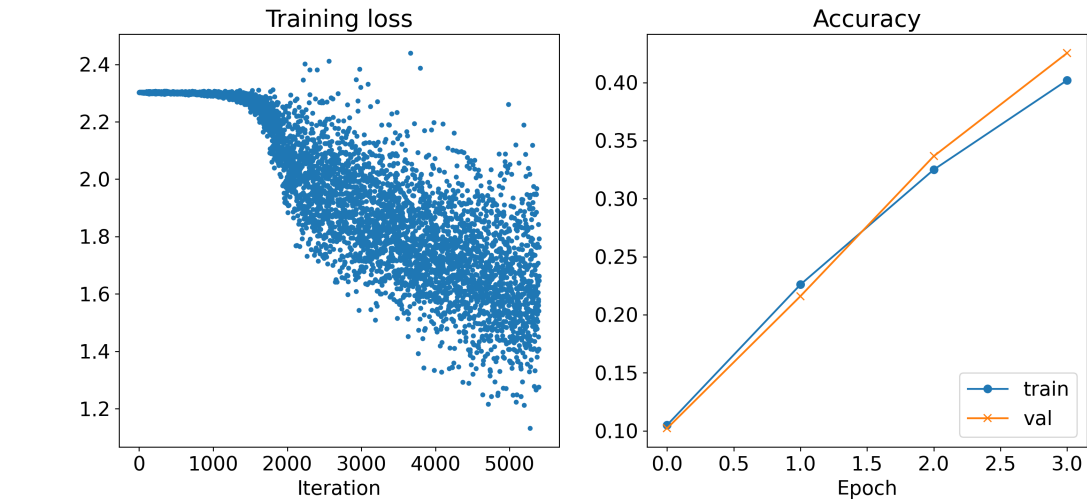


1 (c)











Test accuracy for CIFAR dataset: 42.08%













2 (c)



## Training samples

				
Sample: two people walking down a street holding an umbrella <END> GT: <START> two people walking down a street holding an umbrella <END>	Sample: the plate is filled with meat and vegetables <END> GT: <START> the plate is filled with meat and vegetables <END>	Sample: tennis player in a tennis court <UNK> with her tennis racket <END> GT: <START> tennis player in a tennis court <UNK> with her tennis racket <END>	Sample: a man in a blue shirt holding a white plate with some food on it <END> GT: <START> a man in a blue shirt holding a white plate with some food on it <END>	Sample: a <UNK> vase being displayed in a <UNK> <END> GT: <START> a <UNK> vase being displayed in a <UNK> <END>
				
Sample: a person is standing on the water on a <UNK> board <END> GT: <START> a person is standing on the water on a <UNK> board <END>	Sample: a traffic signal with a very big pretty building by it <END> GT: <START> a traffic signal with a very big pretty building by it <END>	Sample: a very big room with a big pretty clock <END> GT: <START> a very big room with a big pretty clock <END>	Sample: many beautiful fruit <UNK> line the shelves in the market <END> GT: <START> many beautiful fruit <UNK> line the shelves in the market <END>	Sample: a double decker green bus driving down a <UNK> road near a lake <END> GT: <START> a double decker green bus driving down a <UNK> road near a lake <END>

## Validation samples

				
Sample: five man sitting on a boy and a table with a laptop <END> GT: <START> a herd of sheep that are walking through a large group of people <END>	Sample: two man sitting on a <UNK> <END> GT: <START> a row of vintage cars in a grassy field <END>	Sample: train <UNK> up <UNK> and a tree near a <UNK> <END> GT: <START> the young man is <UNK> the young woman on top of her head <END>	Sample: young woman under a <UNK> with a <UNK> in the bench <END> GT: <START> a young man carrying a surf board under his arm <END>	Sample: woman cows walking standing on the <UNK> with a <UNK> <END> GT: <START> an image of a man on the beach riding horse <END>
				
Sample: a man standing on the dirt <UNK> with a <UNK> <END> GT: <START> a person holding a baseball bat in a <UNK> cage <END>	Sample: two women with her <UNK> sitting and a umbrella <END> GT: <START> a woman is reading on a park bench beside a <UNK> <END>	Sample: man woman on a surfboard riding a wave of a <UNK> <END> GT: <START> a person who is surfing in a wave pool <END>	Sample: a man riding flying a kite in a field <END> GT: <START> a man that is surfing on a wave in water <END>	Sample: several <UNK> with a <UNK> of the <UNK> of a <UNK> <END> GT: <START> a meal of sandwiches potatoes and red <UNK> beer <END>

textbf3 (b)

**Fine-tuned pretrained model**

Training time	0m 0s
Best val Acc	0.712418
Epoch	0/4
train Loss	0.5000
Acc	0.7664
val Loss	0.3085
Acc	0.8758
Epoch	1/4
train Loss	0.5936
Acc	0.7254
val Loss	0.2439
Acc	0.9150
Epoch	2/4
train Loss	0.5174
Acc	0.7828
val Loss	0.3162
Acc	0.8824
Epoch	3/4
train Loss	0.5208
Acc	0.7705
val Loss	0.3700
Acc	0.8889
Epoch	4/4
train Loss	0.7435
Acc	0.7910
val Loss	0.3417
Acc	0.8562
Training time	0m 6s
Best val Acc	0.915033

**Without finetuning**

Training time	0m 0s
Best val Acc	0.457516
Epoch	0/4
train Loss	0.5814
Acc	0.7049
val Loss	0.2089
Acc	0.9346
Epoch	1/4
train Loss	0.4798
Acc	0.7910
val Loss	0.1932
Acc	0.9477
Epoch	2/4
train Loss	0.5531
Acc	0.7336
val Loss	0.6048
Acc	0.7647
Epoch	3/4
train Loss	0.6411
Acc	0.7418
val Loss	0.1941
Acc	0.9346
Epoch	4/4
train Loss	0.4340
Acc	0.8197
val Loss	0.2179
Acc	0.9281
Training time	0m 4s
Best val Acc	0.947712

3 (c)

Finetuned Model Predictions

bees  
predicted: bees



bees  
predicted: bees



bees  
predicted: bees



ants  
predicted: ants



ants  
predicted: ants



ants  
predicted: ants



Frozen Model Predictions

ants  
predicted: ants



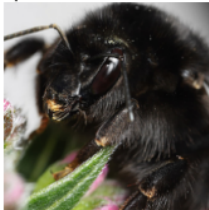
ants  
predicted: ants



ants  
predicted: ants



bees  
predicted: bees



ants  
predicted: ants



bees  
predicted: bees

