

Model

The left screenshot displays the 'Overview' section of the SegFormer documentation. It includes the title 'SegFormer', a search bar, and a list of model variants on the left sidebar. The main content area contains an 'Overview' section with a paragraph describing the model and its features, followed by a table of model variants.

The right screenshot displays the 'Model variant' table, which lists various model variants and their corresponding parameters. The table includes columns for 'Model variant', 'Depths', 'Hidden sizes', 'Decoder hidden size', 'Params (M)', and 'ImageNet-1k Top 1'. The table lists models such as MIT-60, MIT-61, MIT-62, MIT-63, MIT-64, MIT-65, and others, along with their respective depths, hidden sizes, decoder hidden sizes, parameter counts, and ImageNet-1k Top 1 scores.

| Model variant | Depths | Hidden sizes | Decoder hidden size | Params (M) | ImageNet-1k Top 1 |
|---------------|---------------|---------------------|---------------------|------------|-------------------|
| MIT-60 | [2, 2, 2, 2] | [32, 64, 160, 256] | 256 | 3.7 | 70.5 |
| MIT-61 | [2, 2, 2, 2] | [64, 128, 320, 512] | 256 | 14.0 | 78.7 |
| MIT-62 | [3, 4, 6, 3] | [64, 128, 320, 512] | 768 | 25.4 | 81.6 |
| MIT-63 | [3, 4, 16, 3] | [64, 128, 320, 512] | 768 | 45.2 | 83.1 |
| MIT-64 | [3, 6, 27, 3] | [64, 128, 320, 512] | 768 | 62.6 | 83.6 |
| MIT-65 | [3, 6, 40, 3] | [64, 128, 320, 512] | 768 | 82.0 | 83.8 |

https://huggingface.co/docs/transformers/model_doc/segformer

nvidia/mit-b0

```

Breast cancer Segmentation_model/nvidia/mit-b0.py
File Edit View Insert Runtime Tools Help All changes saved

[16] pretrained_model_name = "nvidia/mit-b0"
model = SegformerWrapper.from_pretrained(
    pretrained_model_name,
    id2label=id2label,
    label2id=label2id

Some weights of the model checkpoint at nvidia/mit-b0 were not used when initializing SegformerWrapper: ['classifier.bias', 'classifier.weight'].
This is expected if you are initializing SegformerWrapper from the checkpoint of a model trained on another task or with another architecture (e.g. initializing a Bert
This is not expected if you are initializing SegformerWrapper from the checkpoint of a model that you expect to be exactly identical (initializing a pretrained
Some weights of SegformerWrapper were not initialized from the model checkpoint at nvidia/mit-b0 and are newly initialized: ['decode_head.batch_norm.num_batches_tracked
You should probably TRAIN this model on a down-stream task to be able to use it for predictions and inferences.

[17] save_path = "segformer-breast-cancer_map"

os.environ["WANDB_DISABLED"] = "true"

n_epochs = 30

training_args = TrainingArguments(
    output_dir=save_path,
    learning_rate=5e-5,
    num_train_epochs=n_epochs,
    per_device_train_batch_size=8,
    per_device_eval_batch_size=8,
    save_total_limit=1,
    evaluation_strategy="steps",
    save_strategy="steps",
    report_to="wandb",
)

trainer = GradientDescentTrainer(
    model=model,
    args=training_args,
    train_dataset=train_ds,
    eval_dataset=eval_ds,
    eval_metrics=eval_metrics,
)

trainer.train()
feature_extractor.save_pretrained(save_path)

```

```

Breast cancer Segmentation_model/nvidia/mit-b0.py
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training_args = TrainingArguments(
    output_dir=save_path,
    learning_rate=5e-5,
    num_train_epochs=n_epochs,
    per_device_train_batch_size=8,
    per_device_eval_batch_size=8,
    save_total_limit=1,
    evaluation_strategy="steps",
    save_strategy="steps",
    save_steps=500,
    eval_steps=500,
    eval_accumulation_steps=1,
    remove_unused_columns=True,
    push_to_hub=False,
    load_best_model_at_end=True,
)

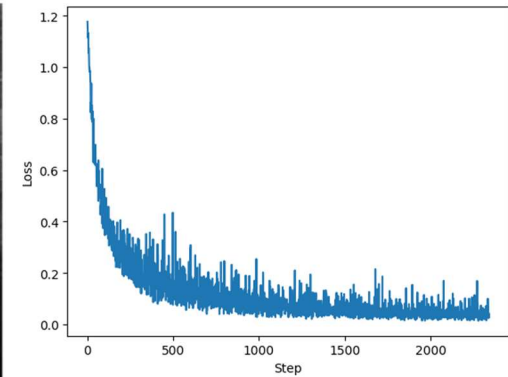
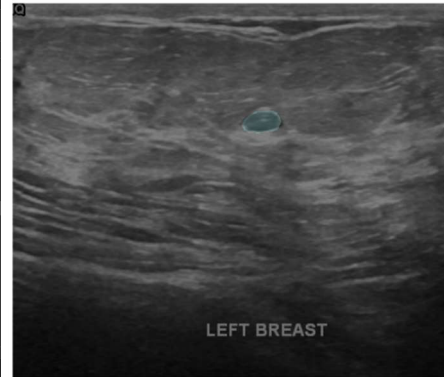
trainer = GradientDescentTrainer(
    model=model,
    args=training_args,
    train_dataset=train_ds,
    eval_dataset=eval_ds,
    eval_metrics=eval_metrics,
)

trainer.train()
feature_extractor.save_pretrained(save_path)

```

using the 'WANDB_DISABLED' environment variable is deprecated and will be removed in v1. Use the --report to flag to control the integration used for logging result (for instance --report local[local] or --report wandb[wandb]). This implementation of Adam is deprecated and will be removed in a future version. Use the PyTorch implementation of Adam.

| step | training loss | validation loss | mean f1 | mean accuracy | overall accuracy | per category iou | per category accuracy |
|------|---------------|-----------------|----------|---------------|------------------|--|--|
| 300 | 0.209600 | 0.215947 | 0.523417 | 0.578117 | 0.606431 | [0.842063803773844, 0.3665902498018635, 0.2678621862402236] | [0.8619620488032820, 0.4219604380070702, 0.3147194000907698] |
| 600 | 0.165800 | 0.174466 | 0.573207 | 0.643823 | 0.943820 | [0.8921412119127394, 0.420667840411855, 0.33701318188874] | [0.885734130733002, 0.5151872238181004, 0.4007081200337624] |
| 900 | 0.073600 | 0.166230 | 0.596763 | 0.695033 | 0.944530 | [0.8538446703266276, 0.47743070912595175, 0.388004505405059] | [0.8621866262362753, 0.671606033185107, 0.4433884254738972] |
| 1200 | 0.068700 | 0.159162 | 0.630718 | 0.697750 | 0.951775 | [0.8565794140025272, 0.533481103681756, 0.387044657402669] | [0.860751898670803, 0.636888838610361, 0.463059522230669] |
| 1500 | 0.045800 | 0.166520 | 0.623750 | 0.752557 | 0.948087 | [0.8534007074690326, 0.498454498271339, 0.4183827884125477] | [0.8745820318278756, 0.739216801570909, 0.5464038710274] |
| 1800 | 0.096800 | 0.158899 | 0.650461 | 0.749623 | 0.951577 | [0.8572574664986895, 0.5435462007070252, 0.450079402303077] | [0.8825440751699485, 0.689959435134044, 0.573293070130763] |
| 2100 | 0.030800 | 0.167777 | 0.633117 | 0.724315 | 0.862021 | [0.8563011564204006, 0.5303046787240816, 0.408003784602076] | [0.8848243781731803, 0.690430394984136, 0.497547711987278] |



nvidia/mit-b1

```
colab.research.google.com/15wvT4cU7WtWtYtNEBw4GzG8GADNt9yHwA9cdEom-qVM-3Pzhe

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Breast cancer Segmentation_model nvidia/mit-b1.pyb

File Edit View Insert Runtime Tools Help All changes saved

Code + Text

[20] pretrained_model_name = "nvidia/mit-b1"
model = SegformerForSemanticSegmentation.from_pretrained(
    pretrained_model_name,
    ignore_mismatched_sizes=True,
)

Some weights of the model checkpoint at nvidia/mit-b1 were not used when initializing SegformerForSemanticSegmentation: ['classifier.weight', '']
This is expected if you are initializing SegformerForSemanticSegmentation from the checkpoint of a model trained on another task or with another architecture.
This is not expected if you are initializing SegformerForSemanticSegmentation from the checkpoint of a model that you expect to be exactly like the original.
Some weights of SegformerForSemanticSegmentation were not initialized from the model checkpoint at nvidia/mit-b1 and are newly initialized from the random normal distribution.
You should probably train this model on a downstream task to be able to use it for predictions and inference.

save_path = "segformer-breast-cancer_30ep"

[20] os.environ["WANDB_DISABLED"] = "true"

n_epochs = 30

training_args = TrainingArguments(
    output_dir=save_path,
    learning_rate=5e-5,
    num_train_epochs=n_epochs,
    per_device_train_batch_size=4,
    per_device_eval_batch_size=4,
    save_total_limit=1,
    evaluation_strategy="steps",
    save_strategy="steps",
    eval_accumulation_steps=None,
    remove_unused_columns=True,
    push_to_hub=False,
    load_best_model_at_end=True,
)

trainer = GradientDescentTrainer(
    model=model,
    args=training_args,
    train_dataset=train_data_loader,
    eval_dataset=eval_data_loader,
    compute_metrics=compute_metrics,
)

trainer.train()
trainer.save_pretrained(save_path)
```

```
colab.research.google.com/15wvT4cU7WtWtYtNEBw4GzG8GADNt9yHwA9cdEom-qVM-3Pzhe

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Breast cancer Segmentation_model nvidia/mit-b1.pyb

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Code + Text

n_epochs = 30

training_args = TrainingArguments(
    output_dir=save_path,
    learning_rate=5e-5,
    num_train_epochs=n_epochs,
    per_device_train_batch_size=4,
    per_device_eval_batch_size=4,
    save_total_limit=1,
    evaluation_strategy="steps",
    save_strategy="steps",
    eval_accumulation_steps=None,
    remove_unused_columns=True,
    push_to_hub=False,
    load_best_model_at_end=True,
)

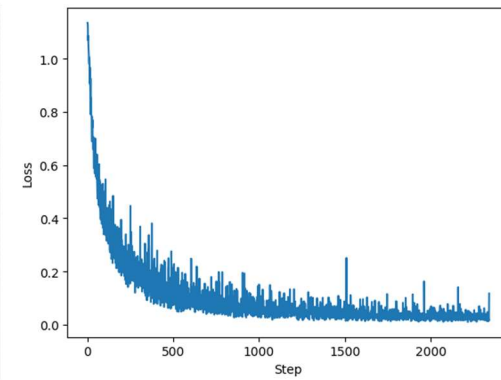
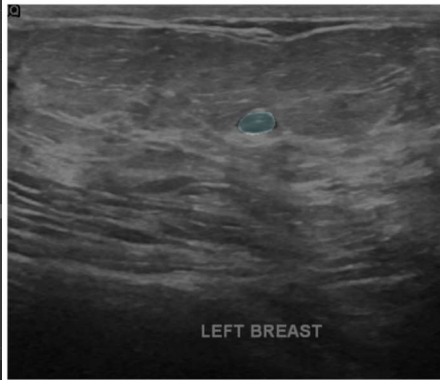
trainer = GradientDescentTrainer(
    model=model,
    args=training_args,
    train_dataset=train_data_loader,
    eval_dataset=eval_data_loader,
    compute_metrics=compute_metrics,
)

trainer.train()
trainer.save_pretrained(save_path)
```

Using the 'WANDB_DISABLED' environment variable is deprecated and will be removed in v5. Use the --report flag to control the integrations use (see https://huggingface.co/docs/transformers/main/en/transformers-cli#report).

202402240 1:01:36, Epoch 30/30

| step | Training Loss | Validation Loss | Mean IoU | Mean Accuracy | Overall Accuracy | Per Category IoU | Per Category Accuracy |
|------|---------------|-----------------|----------|---------------|------------------|---|---|
| 300 | 0.146900 | 0.193732 | 0.514651 | 0.579031 | 0.948549 | [0.98582457737942, 0.480325252575077, 0.252581720918994] | [0.9048017283294, 0.480325252575077, 0.252581720918994] |
| 600 | 0.062000 | 0.172178 | 0.584984 | 0.658575 | 0.950474 | [0.9006746162787474, 0.422845434214734, 0.201431170502028] | [0.896030504003321, 0.608911715035658, 0.3302112741500965] |
| 900 | 0.031800 | 0.150402 | 0.601856 | 0.730659 | 0.953451 | [0.9110036253689917, 0.4847787706900075, 0.402883054509994] | [0.894098418919357, 0.652338497919954, 0.552330248119594] |
| 1200 | 0.050200 | 0.180465 | 0.615446 | 0.705278 | 0.957171 | [0.90380332884918, 0.4747172878148318, 0.404339525381632] | [0.987476315523105, 0.6042692389611727, 0.5248702481181572] |
| 1500 | 0.052900 | 0.154271 | 0.622907 | 0.737768 | 0.957094 | [0.86020288198045, 0.4862198438304637, 0.4144872817177] | [0.983824543633326, 0.689701521622345, 0.537705070566188] |
| 1800 | 0.053000 | 0.168264 | 0.613125 | 0.707752 | 0.957058 | [0.961462896153844, 0.4803444371686506, 0.4301534467435355] | [0.98716062770528, 0.6152483337836757, 0.526474185845792] |
| 2100 | 0.015200 | 0.171190 | 0.618745 | 0.714158 | 0.957871 | [0.98472659967932, 0.4803444371686506, 0.4301534467435355] | [0.98736786848205, 0.6388707845335975, 0.5182189118155515] |



nvidia/mit-b2

```

Breast cancer Segmentation_model nvidia/mit-b2.py
File Edit View Insert Run/Tools Help

Files
  Dataset_BUSI_with_GT
  sample_data
  engine-breast-cancer_30ep
  breast-ultrasound-images-dataset...
  kaggle.json

Code + Text
  pretrained_model_name = "nvidia/mit-b2"
  model = SegformerSemanticSegmentation.from_pretrained(
    pretrained_model_name,
    is_trainable=True,
    is_decoder=True
  )
  Downloading pytorch_model.bin: 100% [70.0k/70.0k (0.00-0.00, 3.50MB/s)]
  Some weights of the model checkpoint at nvidia/mit-b2 were not used when initializing SegformerSemanticSegmentation: ['classifier.weight', 'c']
  - This is expected if you are initializing SegformerSemanticSegmentation from the checkpoint of a model trained on another task or with epochs
  - This is NOT expected if you are initializing SegformerSemanticSegmentation from the checkpoint of a model that you expect to be exactly lder
  - Some weights of SegformerSemanticSegmentation were not initialized from the model checkpoint at nvidia/mit-b2 and are newly initialized. [See
  You should probably TRAIN this model on a down-stream task to be able to use it for predictions and inference.]
  save_path = "segformer-breast-cancer_30ep"
  os.environ["WORLD_SIZE"] = "1"
  n_epochs = 30
  training_args = TrainingArguments(
    output_dir=save_path,
    learning_rate=5e-5,
    num_train_epochs=n_epochs,
    per_device_train_batch_size=1,
    per_device_eval_batch_size=1,
  )
  trainer = GradientDescentTrainer(
    model=model,
    args=training_args,
    train_dataset=train_ds,
    eval_dataset=eval_ds,
    compute_metrics=compute_metrics,
  )
  trainer.train()
  Feature extractor save_pretrained(save_path)
  Completed at 4:37PM
  5/10/2023

```

```

Breast cancer Segmentation_model nvidia/mit-b2.py
File Edit View Insert Run/Tools Help

Files
  Dataset_BUSI_with_GT
  sample_data
  engine-breast-cancer_30ep
  breast-ultrasound-images-dataset...
  kaggle.json

Code + Text
  training_args = TrainingArguments(
    output_dir=save_path,
    learning_rate=5e-5,
    num_train_epochs=n_epochs,
    per_device_train_batch_size=1,
    per_device_eval_batch_size=1,
    save_total_limit=1,
    evaluation_strategy="steps",
    save_strategy="steps",
    save_steps=50,
    eval_steps=50,
    logging_steps=50,
    eval_accumulation_steps=1,
    remove_unused_columns=True,
    push_to_hub=False,
    load_best_model_at_end=True,
  )
  trainer = GradientDescentTrainer(
    model=model,
    args=training_args,
    train_dataset=train_ds,
    eval_dataset=eval_ds,
    compute_metrics=compute_metrics,
  )
  trainer.train()
  Feature extractor save_pretrained(save_path)
  Completed at 4:37PM
  5/10/2023

```

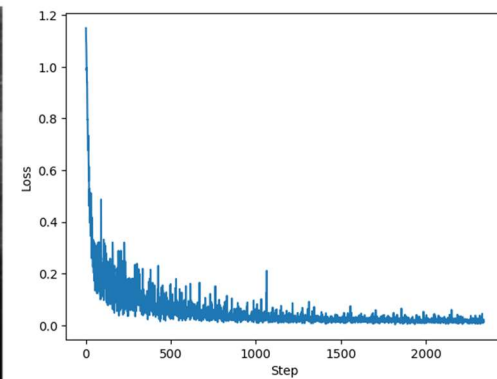
```

Breast cancer Segmentation_model nvidia/mit-b2.py
File Edit View Insert Run/Tools Help

Files
  Dataset_BUSI_with_GT
  sample_data
  engine-breast-cancer_30ep
  breast-ultrasound-images-dataset...
  kaggle.json

Code + Text
  using the 'WORLD_SIZE' environment variable is deprecated and will be removed in v5, use the --report_to flag to control the integrations with
  step Training Loss Validation Loss Mean IoU Mean Accuracy Overall Accuracy Per Category IoU Per Category Accuracy
  300 0.150000 0.137384 0.634565 0.719667 0.903133 [0.900077564162074, 0.920377986959655, 0.888335951914885, 0.920377986959655, 0.888335951914885]
  600 0.093000 0.157070 0.650745 0.763938 0.903093 [0.895884366725648, 0.95546623786625, 0.85546623786625, 0.95546623786625, 0.85546623786625]
  900 0.021600 0.174455 0.641277 0.740088 0.903096 [0.903016174293995, 0.915450208225258, 0.884534310019435, 0.915450208225258, 0.884534310019435]
  1200 0.019300 0.204927 0.654343 0.734491 0.905643 [0.905620156730303, 0.86643666212965, 0.86643666212965, 0.86643666212965, 0.86643666212965]
  1500 0.030400 0.207232 0.658659 0.744731 0.906106 [0.91490941765748, 0.541767421458567, 0.541767421458567, 0.541767421458567, 0.541767421458567]
  1800 0.010800 0.205029 0.656505 0.747664 0.905629 [0.922808737149653, 0.86643666212965, 0.86643666212965, 0.86643666212965, 0.86643666212965]
  2100 0.010200 0.211674 0.657637 0.744775 0.905940 [0.91842917329679, 0.86643666212965, 0.86643666212965, 0.86643666212965, 0.86643666212965]
  Trainer is attempting to log a value of "[0.900077564162074, 0.920377986959655, 0.888335951914885, 0.920377986959655, 0.888335951914885]" of type class 'list' for key 'eval/per_
  Completed at 4:37PM
  5/10/2023

```



nvidia/mit-b3

```

Breast cancer Segmentation_model nvidia/mit-b3.py
File Edit View Insert RunTime Tools Help Last edited on May 13

+ Code - Text
pretrained_model_name = "nvidia/mit-b3"
model = SegformerForSemanticSegmentation.from_pretrained(
    pretrained_model_name,
    ignore_mismatched_sizes=True,
)

Downloading pytorch_model.bin: 100% [ 77861798/78 00:00:00, 207MB/s]

Some weights of the model checkpoint at nvidia/mit-b3 were not used when initializing SegformerForSemanticSegmentation: ['classifier_head', 'classifier_weight'].
This is expected if you are initializing SegformerForSemanticSegmentation from the checkpoint of a model trained on another task or with another architecture (e.g. initializing a BertForSequenceClassification model from a BertPreTrainedModel).
This is not expected if you are initializing SegformerForSemanticSegmentation from the checkpoint of a model that you expect to be exactly identical (initializing a SegformerForSemanticSegmentation model from a SegformerForSemanticSegmentation checkpoint).
Some weights of SegformerForSemanticSegmentation were not initialized from the model checkpoint at nvidia/mit-b3 and are newly initialized from the random normal distribution. The names of these weights are: ['decoder_head_linear_pos_weight', 'decoder_head_linear_cls_weight', 'decoder_head_linear_cls_weight'].
You should probably TRAIN this model on a down-stream task to be able to use it for predictions and inference.

[] save_path = "segformer-breast-cancer_seg"

[] os.makedirs(os.path.join(save_path, "train"), exist_ok=True)

n_epochs = 30

trainer = GradientDescentTrainer(
    output_dir=save_path,
    training_data_loader=train_loader,
    validation_data_loader=val_loader,
    per_device_train_batch_size=per_device_train_batch_size,
    per_device_val_batch_size=per_device_val_batch_size,
    num_workers=num_workers,
    evaluation_strategy="steps",
    save_strategy="steps",
    save_steps=100,
    eval_steps=100,
    logging_steps=10,
    eval_accumulation_steps=1,
    remove_unused_columns=True,
    push_to_hub=False,
    load_best_model_at_end=True,
)

trainer.train()

feature_extractor.save_pretrained(save_path)

```

```

Breast cancer Segmentation_model nvidia/mit-b3.py
File Edit View Insert RunTime Tools Help Last edited on May 13

+ Code - Text
save_path = "segformer-breast-cancer_seg"

os.makedirs(os.path.join(save_path, "train"), exist_ok=True)

n_epochs = 30

trainer = GradientDescentTrainer(
    output_dir=save_path,
    training_data_loader=train_loader,
    validation_data_loader=val_loader,
    per_device_train_batch_size=per_device_train_batch_size,
    per_device_val_batch_size=per_device_val_batch_size,
    num_workers=num_workers,
    evaluation_strategy="steps",
    save_strategy="steps",
    save_steps=100,
    eval_steps=100,
    logging_steps=10,
    eval_accumulation_steps=1,
    remove_unused_columns=True,
    push_to_hub=False,
    load_best_model_at_end=True,
)

trainer.train()

feature_extractor.save_pretrained(save_path)

```

```

Breast cancer Segmentation_model nvidia/mit-b3.py
File Edit View Insert RunTime Tools Help Last edited on May 13

+ Code - Text
trainer.train()

feature_extractor.save_pretrained(save_path)

Using the "WANDB_DISABLED" environment variable is deprecated and will be removed in v5. Use the --report to flag to control the integrations used for logging result (for instance --report to none).
For further information, see: https://huggingface.co/docs/transformers/main_classes/callback#transformers.logging_utils.LoggingHandler

Step Training Loss Validation Loss Mean User Memory Accuracy Recall Accuracy Per Category Iou
0 0.04700 0.13707 0.02091 0.68805 0.96705 [0.90244547006, 0.470220667807791, 0.501779601843596] [0.91101103155221473, 0.5068406870006, 0.506747454034061]
100 0.028100 0.105107 0.048671 0.788335 0.954703 [0.96209595434406, 0.422249640820173, 0.514776109189784] [0.97721135521645, 0.68777491028057, 0.68082449247401]
200 0.019000 0.102703 0.063006 0.802177 0.959903 [0.96436065720528, 0.4913547233398, 0.514776109189784] [0.98149441416247, 0.7049270402787, 0.70923317101222]
300 0.017000 0.101108 0.073507 0.797100 0.959227 [0.964701720323704, 0.49080422122818, 0.514776109189784] [0.9820171718404, 0.681010240404, 0.68177600076094]
400 0.015000 0.100303 0.082003 0.773502 0.959206 [0.967020240204, 0.48505490690514, 0.514776109189784] [0.9820171718404, 0.681010240404, 0.68177600076094]
500 0.013000 0.100003 0.071103 0.797004 0.959166 [0.9654718204343, 0.484437470866703, 0.514776109189784] [0.9820171718404, 0.681010240404, 0.68177600076094]
600 0.011000 0.098888 0.071041 0.797022 0.959480 [0.964951622237061, 0.485864297206348, 0.514776109189784] [0.9820171718404, 0.681010240404, 0.68177600076094]
700 0.009000 0.098888 0.071041 0.797022 0.959480 [0.964951622237061, 0.485864297206348, 0.514776109189784] [0.9820171718404, 0.681010240404, 0.68177600076094]
800 0.007000 0.098888 0.071041 0.797022 0.959480 [0.964951622237061, 0.485864297206348, 0.514776109189784] [0.9820171718404, 0.681010240404, 0.68177600076094]
900 0.005000 0.098888 0.071041 0.797022 0.959480 [0.964951622237061, 0.485864297206348, 0.514776109189784] [0.9820171718404, 0.681010240404, 0.68177600076094]
1000 0.003000 0.098888 0.071041 0.797022 0.959480 [0.964951622237061, 0.485864297206348, 0.514776109189784] [0.9820171718404, 0.681010240404, 0.68177600076094]
1100 0.001000 0.098888 0.071041 0.797022 0.959480 [0.964951622237061, 0.485864297206348, 0.514776109189784] [0.9820171718404, 0.681010240404, 0.68177600076094]
1200 0.000000 0.098888 0.071041 0.797022 0.959480 [0.964951622237061, 0.485864297206348, 0.514776109189784] [0.9820171718404, 0.681010240404, 0.68177600076094]
1300 0.000000 0.098888 0.071041 0.797022 0.959480 [0.964951622237061, 0.485864297206348, 0.514776109189784] [0.9820171718404, 0.681010240404, 0.68177600076094]
1400 0.000000 0.098888 0.071041 0.797022 0.959480 [0.964951622237061, 0.485864297206348, 0.514776109189784] [0.9820171718404, 0.681010240404, 0.68177600076094]
1500 0.000000 0.098888 0.071041 0.797022 0.959480 [0.964951622237061, 0.485864297206348, 0.514776109189784] [0.9820171718404, 0.681010240404, 0.68177600076094]
1600 0.000000 0.098888 0.071041 0.797022 0.959480 [0.964951622237061, 0.485864297206348, 0.514776109189784] [0.9820171718404, 0.681010240404, 0.68177600076094]
1700 0.000000 0.098888 0.071041 0.797022 0.959480 [0.964951622237061, 0.485864297206348, 0.514776109189784] [0.9820171718404, 0.681010240404, 0.68177600076094]
1800 0.000000 0.098888 0.071041 0.797022 0.959480 [0.964951622237061, 0.485864297206348, 0.514776109189784] [0.9820171718404, 0.681010240404, 0.68177600076094]
1900 0.000000 0.098888 0.071041 0.797022 0.959480 [0.964951622237061, 0.485864297206348, 0.514776109189784] [0.9820171718404, 0.681010240404, 0.68177600076094]
2000 0.000000 0.098888 0.071041 0.797022 0.959480 [0.964951622237061, 0.485864297206348, 0.514776109189784] [0.9820171718404, 0.681010240404, 0.68177600076094]
2100 0.000000 0.098888 0.071041 0.797022 0.959480 [0.964951622237061, 0.485864297206348, 0.514776109189784] [0.9820171718404, 0.681010240404, 0.68177600076094]
2200 0.000000 0.098888 0.071041 0.797022 0.959480 [0.964951622237061, 0.485864297206348, 0.514776109189784] [0.9820171718404, 0.681010240404, 0.68177600076094]
2300 0.000000 0.098888 0.071041 0.797022 0.959480 [0.964951622237061, 0.485864297206348, 0.514776109189784] [0.9820171718404, 0.681010240404, 0.68177600076094]
2400 0.000000 0.098888 0.071041 0.797022 0.959480 [0.964951622237061, 0.485864297206348, 0.514776109189784] [0.9820171718404, 0.681010240404, 0.68177600076094]
2500 0.000000 0.098888 0.071041 0.797022 0.959480 [0.964951622237061, 0.485864297206348, 0.514776109189784] [0.9820171718404, 0.681010240404, 0.68177600076094]
2600 0.000000 0.098888 0.071041 0.797022 0.959480 [0.964951622237061, 0.485864297206348, 0.514776109189784] [0.9820171718404, 0.681010240404, 0.68177600076094]
2700 0.000000 0.098888 0.071041 0.797022 0.959480 [0.964951622237061, 0.485864297206348, 0.514776109189784] [0.9820171718404, 0.681010240404, 0.68177600076094]
2800 0.000000 0.098888 0.071041 0.797022 0.959480 [0.964951622237061, 0.485864297206348, 0.514776109189784] [0.9820171718404, 0.681010240404, 0.68177600076094]
2900 0.000000 0.098888 0.071041 0.797022 0.959480 [0.964951622237061, 0.485864297206348, 0.514776109189784] [0.9820171718404, 0.681010240404, 0.68177600076094]
3000 0.000000 0.098888 0.071041 0.797022 0.959480 [0.964951622237061, 0.485864297206348, 0.514776109189784] [0.9820171718404, 0.681010240404, 0.68177600076094]
3100 0.000000 0.098888 0.071041 0.797022 0.959480 [0.964951622237061, 0.485864297206348, 0.514776109189784] [0.9820171718404, 0.681010240404, 0.68177600076094]
3200 0.000000 0.098888 0.071041 0.797022 0.959480 [0.964951622237061, 0.485864297206348, 0.514776109189784] [0.9820171718404, 0.681010240404, 0.68177600076094]
3300 0.000000 0.098888 0.071041 0.797022 0.959480 [0.964951622237061, 0.485864297206348, 0.514776109189784] [0.9820171718404, 0.681010240404, 0.68177600076094]
3400 0.000000 0.098888 0.071041 0.797022 0.959480 [0.964951622237061, 0.485864297206348, 0.514776109189784] [0.9820171718404, 0.681010240404, 0.68177600076094]
3500 0.000000 0.098888 0.071041 0.797022 0.959480 [0.964951622237061, 0.485864297206348, 0.514776109189784] [0.9820171718404, 0.681010240404, 0.68177600076094]
3600 0.000000 0.098888 0.071041 0.797022 0.959480 [0.964951622237061, 0.485864297206348, 0.514776109189784] [0.9820171718404, 0.681010240404, 0.68177600076094]
3700 0.000000 0.098888 0.071041 0.797022 0.959480 [0.964951622237061, 0.485864297206348, 0.514776109189784] [0.9820171718404, 0.681010240404, 0.68177600076094]
3800 0.000000 0.098888 0.071041 0.797022 0.959480 [0.964951622237061, 0.485864297206348, 0.514776109189784] [0.9820171718404, 0.681010240404, 0.68177600076094]
3900 0.000000 0.098888 0.071041 0.797022 0.959480 [0.964951622237061, 0.485864297206348, 0.514776109189784] [0.9820171718404, 0.681010240404, 0.68177600076094]
4000 0.000000 0.098888 0.071041 0.797022 0.959480 [0.964951622237061, 0.485864297206348, 0.514776109189784] [0.9820171718404, 0.681010240404, 0.68177600076094]
4100 0.000000 0.098888 0.071041 0.797022 0.959480 [0.964951622237061, 0.485864297206348, 0.514776109189784] [0.9820171718404, 0.681010240404, 0.68177600076094]
4200 0.000000 0.098888 0.071041 0.797022 0.959480 [0.964951622237061, 0.485864297206348, 0.514776109189784] [0.9820171718404, 0.681010240404, 0.68177600076094]
4300 0.000000 0.098888 0.071041 0.797022 0.959480 [0.964951622237061, 0.485864297206348, 0.514776109189784] [0.9820171718404, 0.681010240404, 0.68177600076094]
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4500 0.000000 0.098888 0.071041 0.797022 0.959480 [0.964951622237061, 0.485864297206348, 0.514776109189784] [0.9820171718404, 0.681010240404, 0.68177600076094]
4600 0.000000 0.098888 0.071041 0.797022 0.959480 [0.964951622237061, 0.485864297206348, 0.514776109189784] [0.9820171718404, 0.681010240404, 0.68177600076094]
4700 0.000000 0.098888 0.071041 0.797022 0.959480 [0.964951622237061, 0.485864297206348, 0.514776109189784] [0.9820171718404, 0.681010240404, 0.68177600076094]
4800 0.000000 0.098888 0.071041 0.797022 0.959480 [0.964951622237061, 0.485864297206348, 0.514776109189784] [0.9820171718404, 0.681010240404, 0.68177600076094]
4900 0.000000 0.098888 0.071041 0.797022 0.959480 [0.964951622237061, 0.485864297206348, 0.514776109189784] [0.9820171718404, 0.681010240404, 0.68177600076094]
5000 0.000000 0.098888 0.071041 0.797022 0.959480 [0.964951622237061, 0.485864297206348, 0.514776109189784] [0.9820171718404, 0.681010240404, 0.68177600076094]
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