```
import Pkg; Pkg;
using Plots, Random
using Distributions, Distributed
using Statistics, LinearAlgebra
using DifferentialEquations, Sundials
using ODEInterpolation, ODEInterpolationRecursive
using Interpolations, Dierckx
using Optimization, OptimizationNLopt
using Optimization, OptimizationOptimJL
using Optimization, OptimizationBBO
using Optimization, OptimizationMOI
using Optimization, OptimizationCMAES
using Optimization, OptimizationPyCMA
using Optimization, OptimizationNLopt
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using Optimization, OptimizationBBO
using Optimization, OptimizationMOI
using Optimization, OptimizationCMAES
using Optimization, OptimizationPyCMA
using Optimization, OptimizationMultistartOptimization
using Optimization, OptimizationMetaheuristics
using Optimization, OptimizationPRIMA
using Optimization, OptimizationSophia
using Optimization, OptimizationOptimisers
using Optimization, OptimizationNOMAD
using Optimization, OptimizationGCMAES
using Optimization, OptimizationCMAKA
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```

```
plt.imshow(Elevation[0,:,:])
plt.colorbar(shrink=0.5)
plt.show(image)
```

```
<matplotlib.image.AxesImage at 0x7f8f0ccc7f0a>
```

```
plt.figure(figsize=(8,6))
training_map_mean = np.zeros(
training_map_mean[Elevation[0,:,:] > 0] = np.mean(Elevation[0,:,:]
training_map_mean[~Elevation[0,:,:] > 0] = -1
plt.imshow(
plt.colorbar(shrink=0.5)
plt.show(image)
```

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<matplotlib.image.AxesImage at 0x7f8f0c7dc0d0>
```

```
training_map_mf = np.zeros(training_map_mean.shape, dtype=np.int8)
training_map_mf[Elevation[0,:,:] > 0] = 1
plt.figure(figsize=(8,6))
training_map_mf[training_map_mf == 0] = -1
training_map_mf[training_map_mf[Elevation[0,:,:] > 0] = 0]
plt.imshow(
plt.colorbar(shrink=0.5)
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np.save("./Input/Elevation_training_map_Krakow.npy", training_map_mf)
```

```
Traceback (most recent call last):
  File "<stdin>", line 1, in <module>
  File "/home/ubuntu/.local/lib/python3.8/site-packages/numpy/lib/npyio.
py", line 518, in save
    raise ValueerrorFrom(e, msg="Failed to write to %s" % f)
ValueerrorFrom: Failed to write to ./Input/Elevation_training_map_Krakow.
npy: cannot write 25,25,1
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```
[0.0000e+00, 0.0000e+00, 0.0000e+00,
  0.0000e+00, 0.0000e+00, 0.0000e+00,
  0.0000e+00, 0.0000e+00, 0.0000e+00,
  
```