```
using Flux
```

```
test = Dense(10 => 8, σ)   # 88 parameters
```

```
test = Dense(10, 8, σ)
```

```
x =  [1, 2, 3, 4, 5, 6, 7, 8, 9, 10]
```

```
x = [1, 2, 3, 4, 5, 6, 7, 8, 9, 10  ]
```

```
[0.950532, 0.0129686, 0.712901, 0.000242098, 0.517416, 0.130111, 0.0165873, 0.99997]
```

```
test(x)
```

```
mdl = Chain(
        Dense(3 => 4, relu),                # 16 parameters
        Dense(4 => 2, relu),                # 10 parameters
      )                   # Total: 4 arrays, 26 parameters, 360 bytes.
```

```
mdl = Chain(Dense(3 => 4, relu), Dense(4 =>2, relu))
```

```
z =  [1, 2, 3]
```

```
z = [1, 2, 3]
```

```
[0.0, 1.70855]
```

```
mdl(z)
```

```
8×10 Matrix{Float32}:
 -0.00977322   0.141388   -0.0112696  …   0.555443     0.257464   0.0222517
  0.51808      0.49966     0.183631       0.00385836  -0.196663  -0.00902881
 -0.496826     0.112875    0.53814       -0.113288     0.536656  -0.146763
  0.125539    -0.167241   -0.245433      -0.128381    -0.47546   -0.0210846
 -0.397278     0.175905    0.56886        0.246304     0.241476  -0.254109
  0.516469     0.0660035   0.449956   …  -0.101063    -0.20325   -0.093281
 -0.515769    -0.0378529  -0.401094       0.151751    -0.502077   0.140307
 -0.325901     0.253305   -0.344145       0.203848     0.547631   0.306574
```

```
test.weight
```

```
0.18363073f0
```

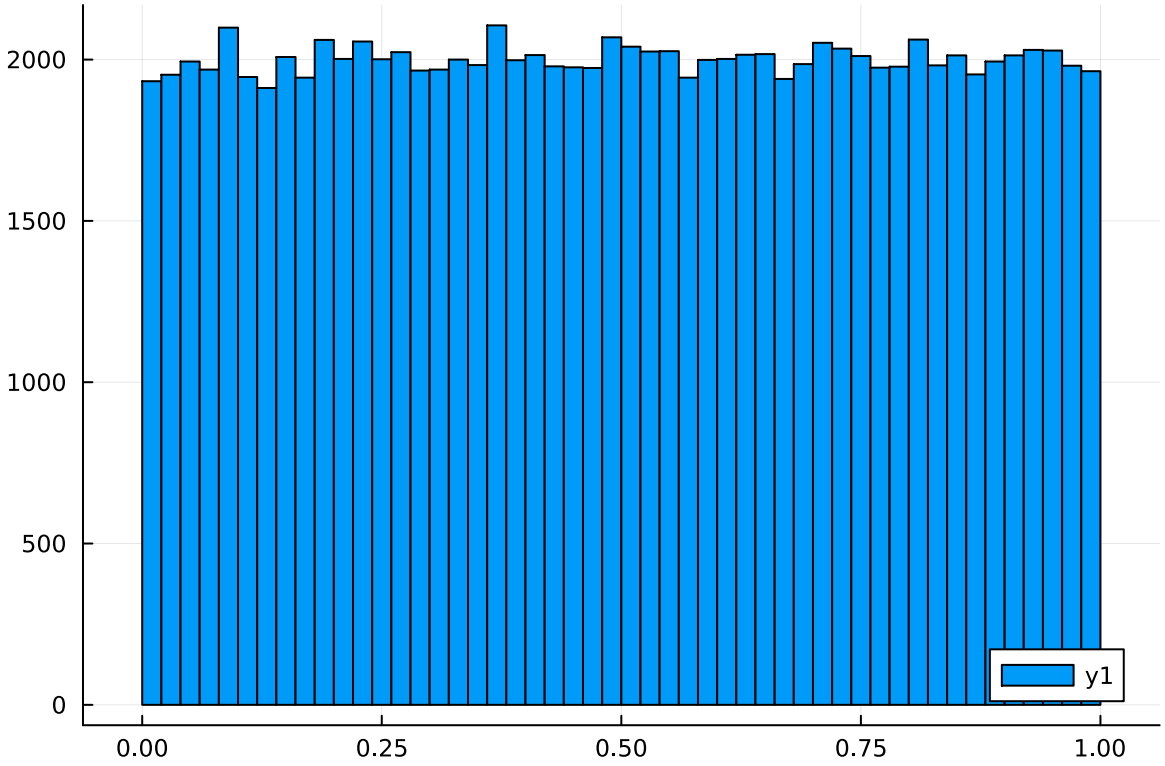
```
test.weight[2, 3]
```

```
using Plots
```

```
n =
```

```
[0.571045, 0.919427, 0.846049, 0.923154, 0.879033, 0.896437, 0.0889564, 0.379507, 0.8407
```

```
n = rand(100000)
```

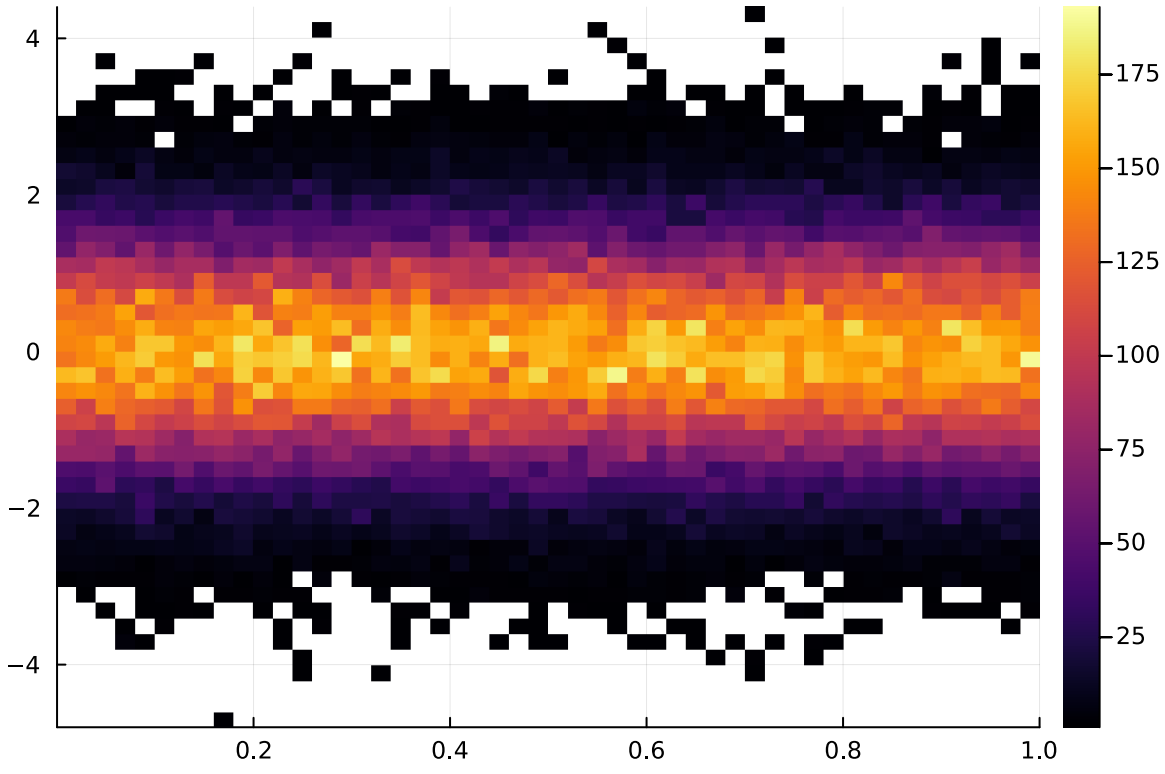



```
histogram(n)
```

```
y =
[0.308005, -0.586075, -1.89961, -0.431746, 0.169106, -0.226006, 0.451951, 0.40123, 1.143
```

```
y = randn(100000)
```

```
Enter cell code...
```



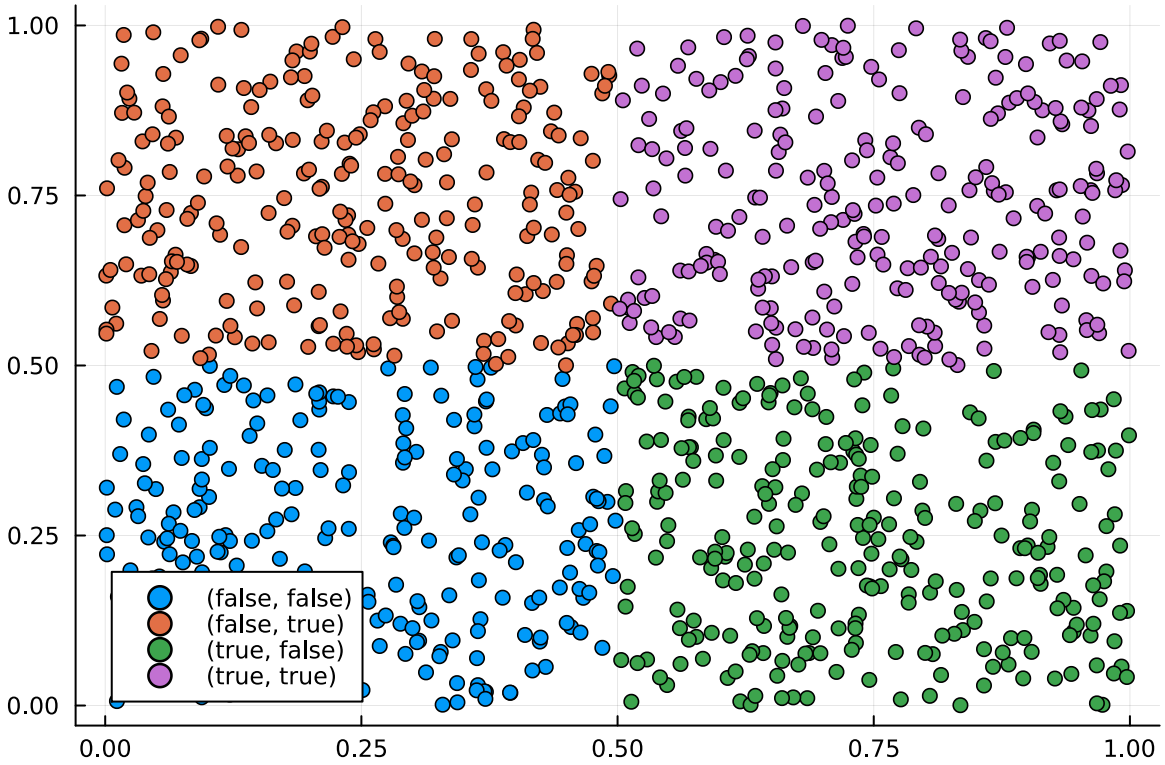

```
histogram2d(n, y ,nbins=(64, 64))
```

```
a = 2×1024 Matrix{Float32}:
 0.418066  0.360369  0.306338  0.44105   …  0.713632   0.798428  0.769731  0.637517
 0.993674  0.410539  0.095324  0.757964      0.0493929  0.407324  0.304698  0.62622
```

```
a = rand(Float32, 2, 1024)
```

```
b =
[(false, true), (false, false), (false, false), (false, true), (false, false), (true, fal
```

```
b= [(col[1]>.5 , col[2]>.5) for col in eachcol(a)]
```




```
scatter(a[1, :], a[2, :], group=b)
```

```
Enter cell code...
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