

TITLE

SUBTITLE

by

Name

TBD

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Chapter 1

My Notebook

1.1 Start importing

```
1 using Plots
2 using Makie
3 using CairoMakie
4 using Distributions
5 using DataFrames
```

1.1.1 Some theory

The Wasserstein Distance for 1D distributions can be obtained by:

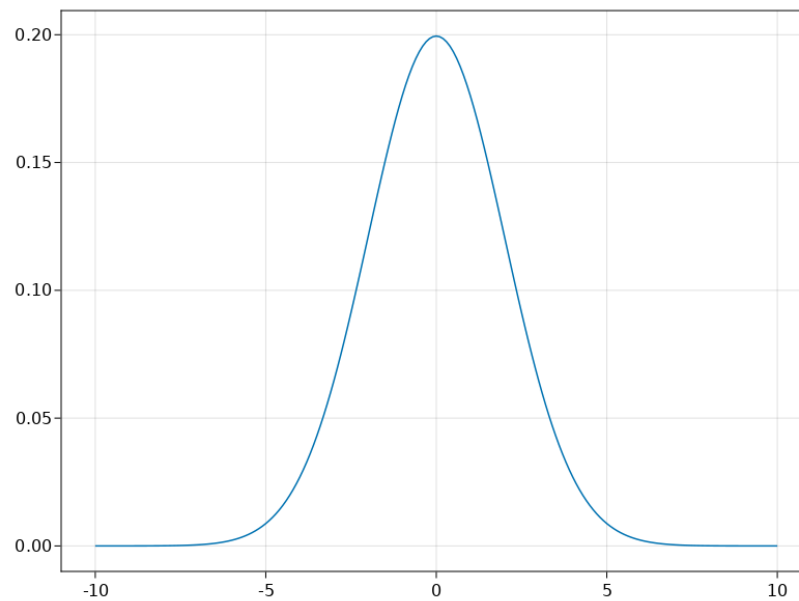
$$\int_0^1 |C_\alpha^{-1}(r) - C_\beta^{-1}(r)|^p dr$$

Where C_α^{-1} is the quantile function for the distribution α (the inverse of the Cumulative Distribution Function).

```
1 μ(x) = pdf(Normal(0,2),x)
2 println("Myplot")
3 Plots.plot(μ)
```

Any["Myplot\n"]

```
1 Makie.lines(-10:0.1:10, μ.(-10:0.1:10))
```



```
1 function example(μ)
2     for i in 1:10
3         println(μ(i))
4     end
5 end
6 example(μ)
```

```
Any["0.17603266338214976\n", "0.12098536225957168\n", "0.06475879783295\n", "7.991870553452737e-6\n", "7.433597573671488e-7\n"]
```

```
Any["0.17603266338214976\n", "0.12098536225957168\n", "0.06475879783295\n", "7.991870553452737e-6\n", "7.433597573671488e-7\n"]
```

```
1 rand(10)
```

```
1 μ;
```

Figure Figure2

```
1 DataFrame(x=rand(10),y=rand(10))
```

	x	y
	Float64	Float64
1	0.0326174	0.589007
2	0.368715	0.690396
3	0.366451	0.803439
4	0.212434	0.581906
5	0.140433	0.678201
6	0.329857	0.50792
7	0.828484	0.0507595
8	0.480084	0.021381
9	0.784926	0.504361
10	0.43102	0.316321