Title

Subtitle

by

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Contents

Chapter 1

My Notebook

1.1 Start importing

```
using Plots
using Makie
using CairoMakie
using Distributions
using DataFrames
```

1.1.1 Some theory

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

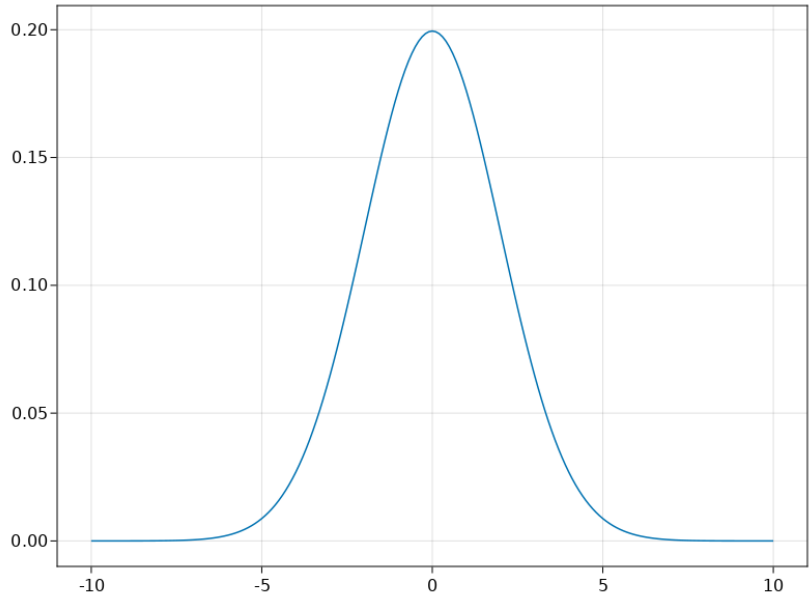
$$\int_0^1 |C_\alpha^{-1}(r) - C_\beta^{-1}(r)|^p dr$$

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

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

```
Any["Myplot\n"]
```

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




```
function example(μ)
    for i in 1:10
        println(μ(i))
    end
end
example(μ)
```

```
Any["0.17603266338214976\n", "0.12098536225957168\n", "0.0647587978329
5\n", "7.991870553452737e-6\n", "7.433597573671488e-7\n"]

Any["0.17603266338214976\n", "0.12098536225957168\n", "0.0647587978329
5\n", "7.991870553452737e-6\n", "7.433597573671488e-7\n"]
```

```
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