

## Small Exercises 6

### Linear Classification

---

These exercises are meant as preparation for the inverted classroom lecture. Keep your answers short: two or three sentences, sometimes even less, should suffice.

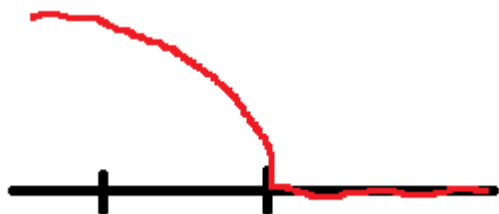
**Problem 1:** Why do we use basis functions? What purpose do they serve?

**Problem 2:** How can we use dimensionality reduction to make classification easier?

**Problem 3:** Why is logistic regression a classification method?

**Problem 4:** What does robustness of a loss function mean?

**Problem 5:** In the lecture, I mentioned a form for an optimally robust loss function. That looked like the image below. What was the problem with this form? (Disregarding the obviously bad drawing :) )



**Problem 6:** Why would someone want to be able to generate data points? (like a generative model allows us to do)