

Practical 1

- 1 (a) Plot the log likelihood function as in slide 19
(b) Find θ so that the log likelihood is maximized.
(c) Repeat (a), (b) for the poisson likelihood on slide 21.
- 2 (a) Using R, simulate a sample of size 64 from the Normal distribution $N(2,1)$. What is the sample mean for your sample? What is the sample variance?
(b) Calculate the p-value of the sampled data for the null hypothesis that $\mu = 0$. You can do this with a formula or simulation.
- 3 (a) Derive the likelihood function in slides 24
(b) write the exact and simplified likelihood in R, and obtain the maximum likelihood estimates