Lab Session 7 Customer Analytics – Questions after Lab

Questions received via email (lab session)

- [Konstantinos];
  (1) start.param: Could you repeat why we set specifically 4 parameters in the start.param vector? Is there a rule of thumb in choosing these values (except that they should be bigger than 0)? Calculating for instance with the estimated parameters: γ/γ+δ Does this have any relation to the average transaction rate?

- [Noa];
  (1) In the files you refer to the paper and the equations, should we know these equations by heart?

Questions received via email (general)

- [Sterre];
  (1) I have a question about exercise 8 of the practice quiz:

  To calculate the likelihood the following formulas are used:
  a <- (p^3)*(1-p)*((1-theta)^4)*theta
  b <- (p^3)*((1-p)^2)*((1-theta)^5)
  likelihood <- a+b

  The donor has donated 3 times in the past five years with the last donation occurring in year 4. I understand, that he can donate 3 times, survive 4 periods and then die; and we get (p^3)*(1-p)*((1-theta)^4)*theta.
  In addition, he can survive 5 periods, but not donate in the last period and we get (p^3)*((1-p)^2)*((1-theta)^5).
  However, I do not understand where the formula for the likelihood <- a+ b comes from. Can you elaborate on this?

- [Maud];
  (1) My question is regarding the formula sheet of CA.
  On this formula sheet, no formulas are given for f.i. optimal sample size (slide 30, Lecture 1). Does this mean we need to know this one (and others) by heart, or are they not of importance for the exam?

- [Konstantinos];
  (1) Can we import packages to compute e.g. statistics functions such as MAE?