

Please load the data “HW09.RData” for this assignment.

1. The object `rt` is the daily returns of Nvidia from January 1, 2011 to Oct 31, 2024. For an investment of $S = \$50000$, compute the estimated one-day VaR and ES at $\alpha = 0.05, 0.04, \dots, 0.01$ (`alpha = seq(0.05, 0.01, -0.01)`) using the following procedures. Justify your choice of threshold.
 - (a) Nonparametric estimation.
 - (b) The peaks-over-threshold/generalized Pareto distribution estimation.

Reminder: Our data are in %. Remember to convert the investment to $S/100$.