

PENN STATE UNIVERSITY  
Department of Economics

Econ 597D Sec 001 Computational Economics  
Project Suggestion 7  
Due Dec 8, 2015

Gallant  
Fall 2015

Write a C++ program to fit the probit model to data using maximum likelihood. Use the optimizer `nlopt` in `libscl`. The cumulative normal distribution function can be computed using `pnorm` in `libscl`.

This problem is harder than it appears. You are going to run into errors when you take logs of the probit when you compute the log likelihood; you will have to find a way to deal with them that does not cause `nlopt` to get the wrong answer. Also, the default tuning parameters of `nlopt` probably will not work for this problem so you will have to experiment until you find values that do work.