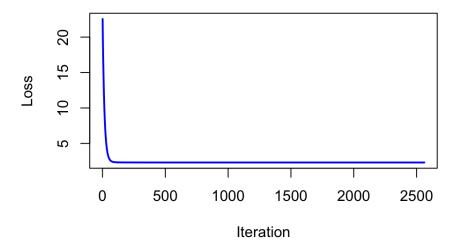
optimisation assignment 3

Tanish Kothari BSD-DH-2424

May 10, 2025

1 Problem 1

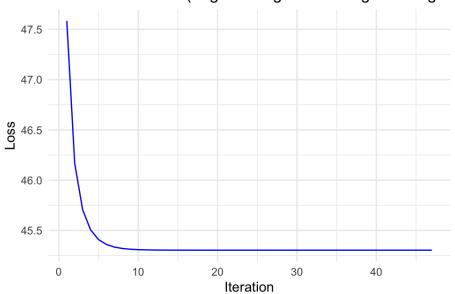
Convergence of Gradient Descent (Linear Regressic



 \bullet Final beta: 1.853088, 2.917036

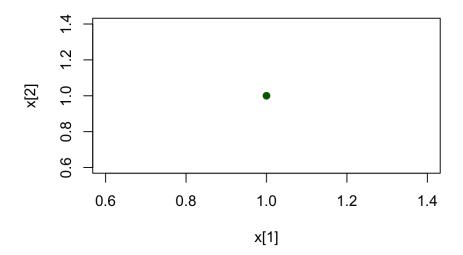
• Number of iterations: 2562

Loss vs. Iterations (Logistic Regression Negative Log-Lil



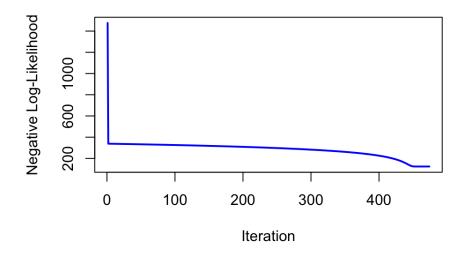
- \bullet Final beta: -0.3751879 , 1.238211 , -1.839857
- Number of iterations: 47

Descent Path



- $\bullet\,$ Final beta: 1 , 1
- Number of iterations: 1

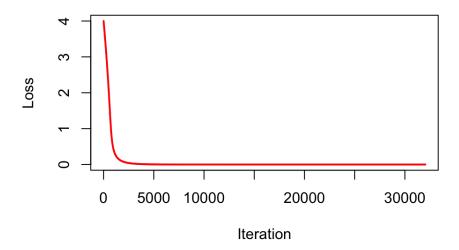
onvergence of Gradient Descent (Negative Log-Likelil



 \bullet Final beta: 5.013222 , 2.093897

• Number of iterations: 474

Convergence of Gradient Descent (Rosenbrock Funct



 \bullet Final beta: 0.9999989 , 0.9999978

• Number of iterations: 32036