

# Rohan Chandra - hmwk9 Solutions

## Question 2

The residual curve for Logistic regression is below:

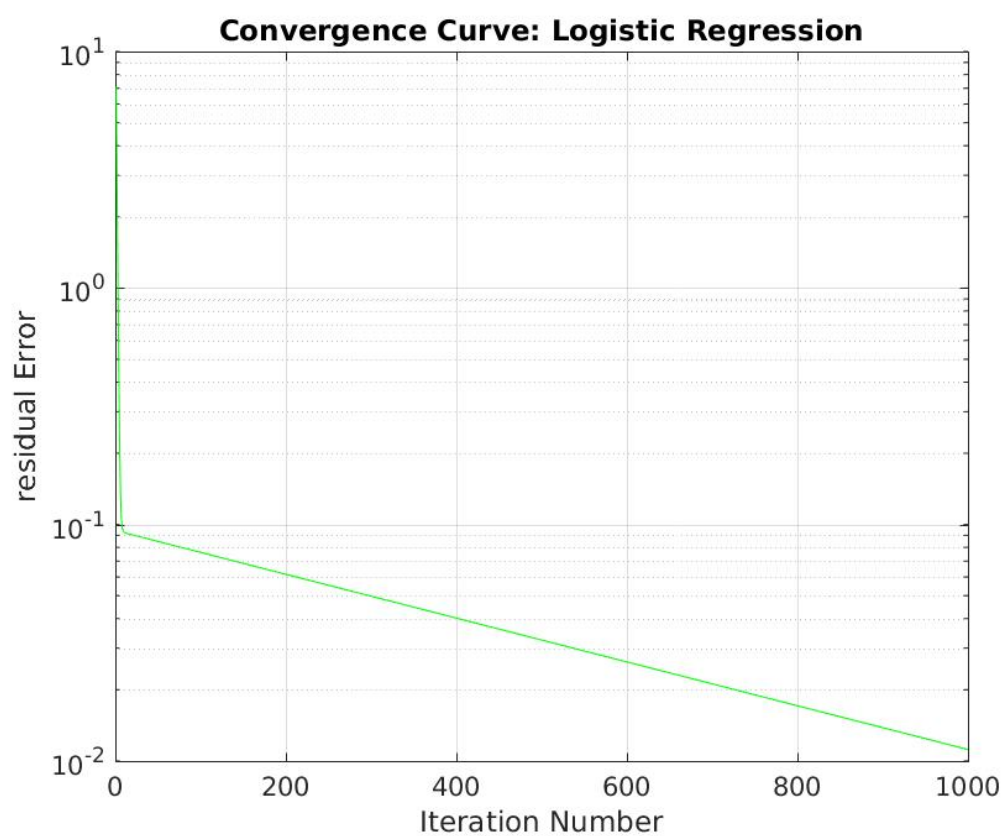


Figure 1: Logistic Regression convergence plot

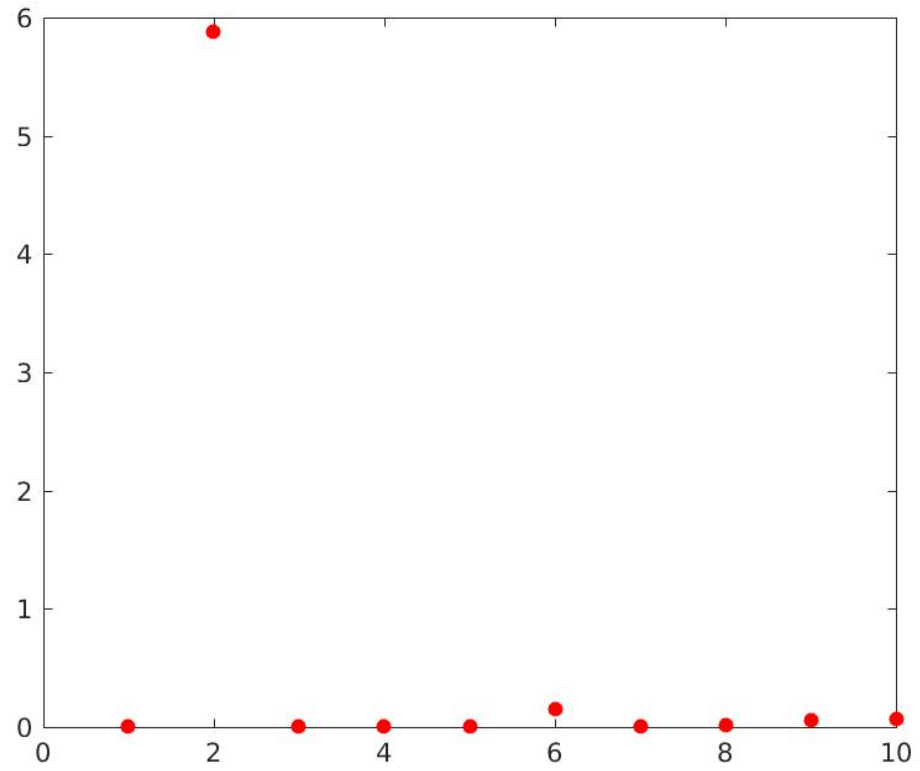


Figure 2: Logistic Regression Solution plot

### Question 3

The residual curve for Total Variation is below:

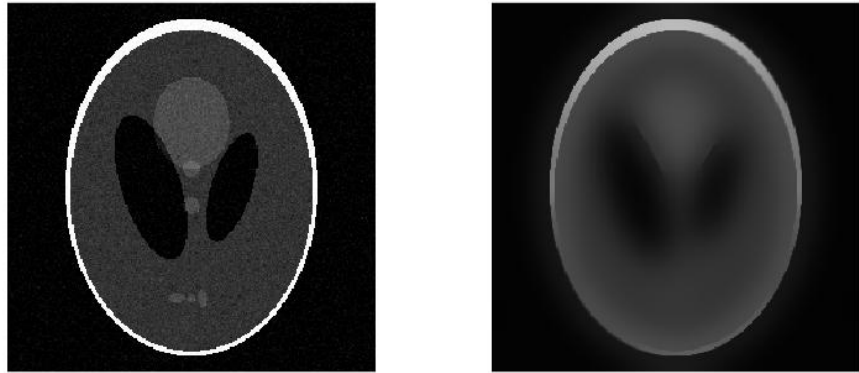


Figure 3: Total Variation plot

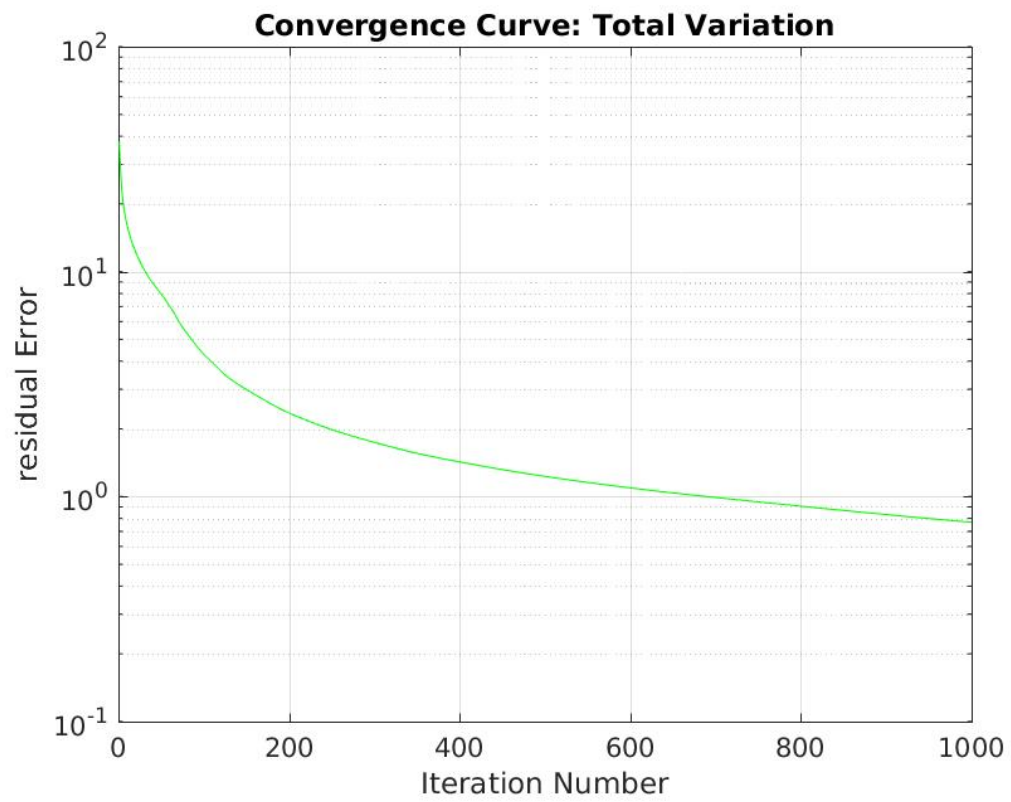


Figure 4: Total Variation convergence plot

## Question 4

The residual curve for Matrix Factorization is below:

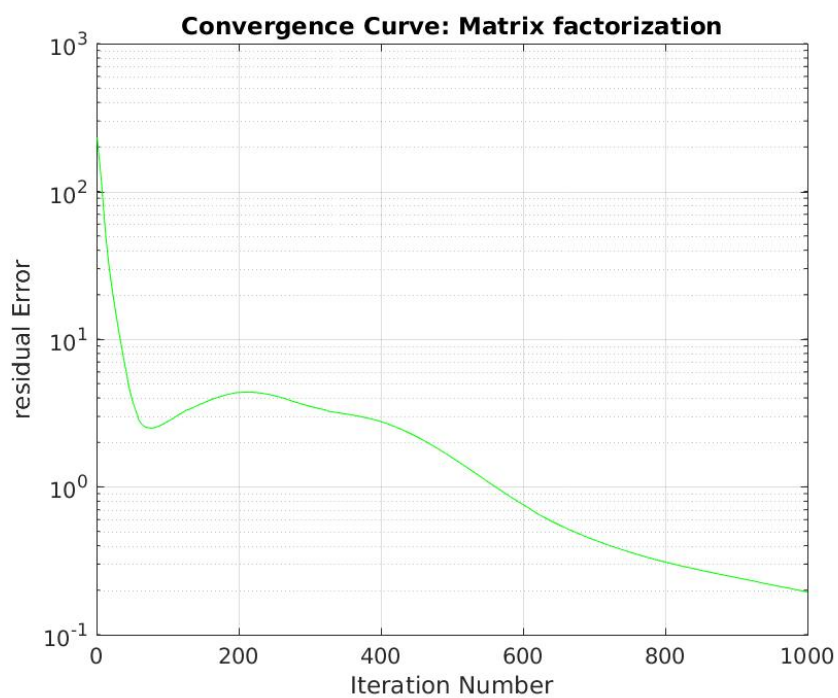


Figure 5: Matrix factorization convergence plot

Yes the recovery method works. Yes, it depends on how you initialize X and Y. It doesn't work if you initialize both X and Y to zero.