DS284-Numerical Linear Algebra - Assignment 4

LOCHAN SURYA TEJA NEELI(06-18-01-10-22-23-1-23198)

October 22, 2023

Answer 1

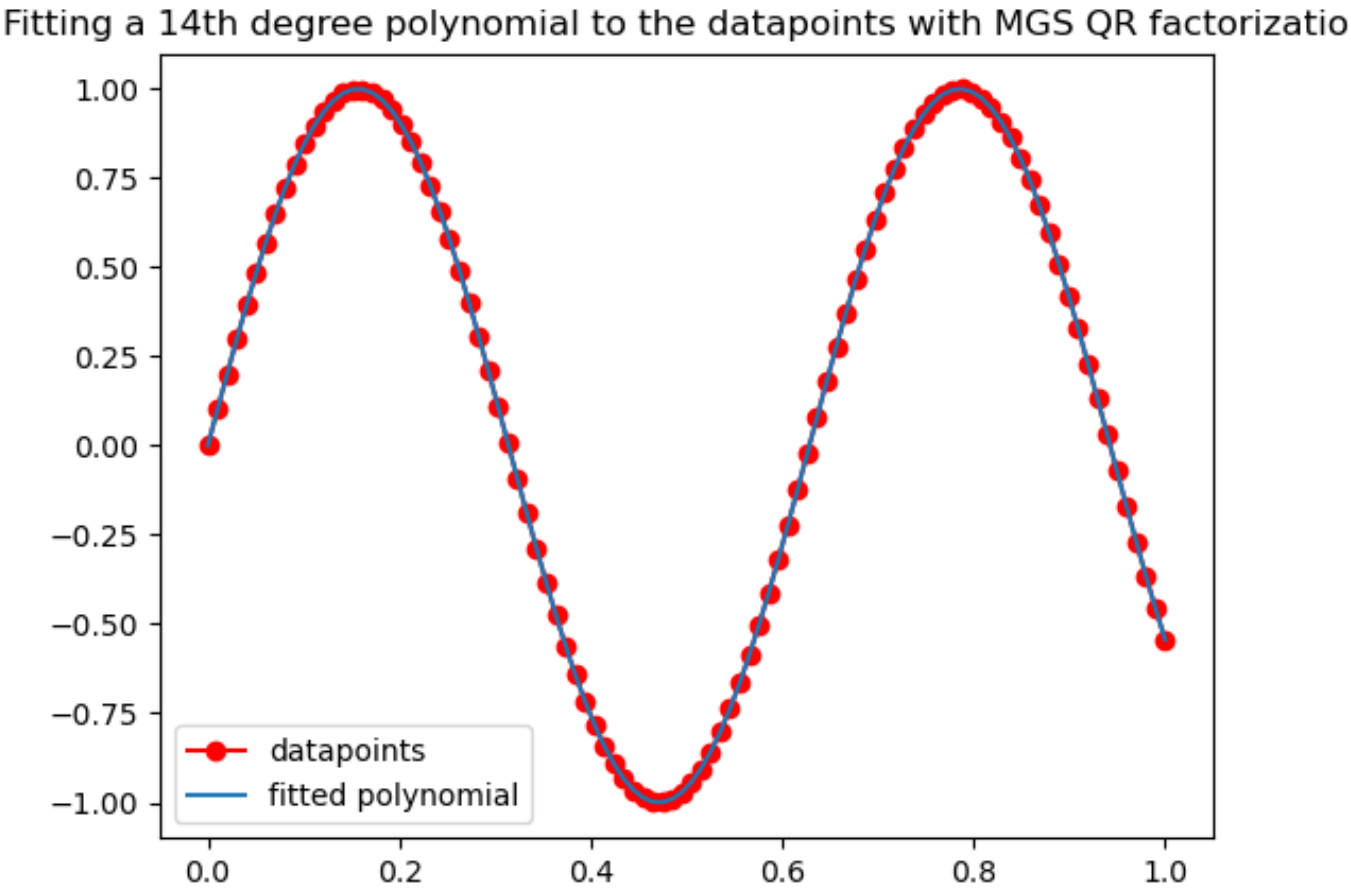

Figure 1: error= 66.47188248164618

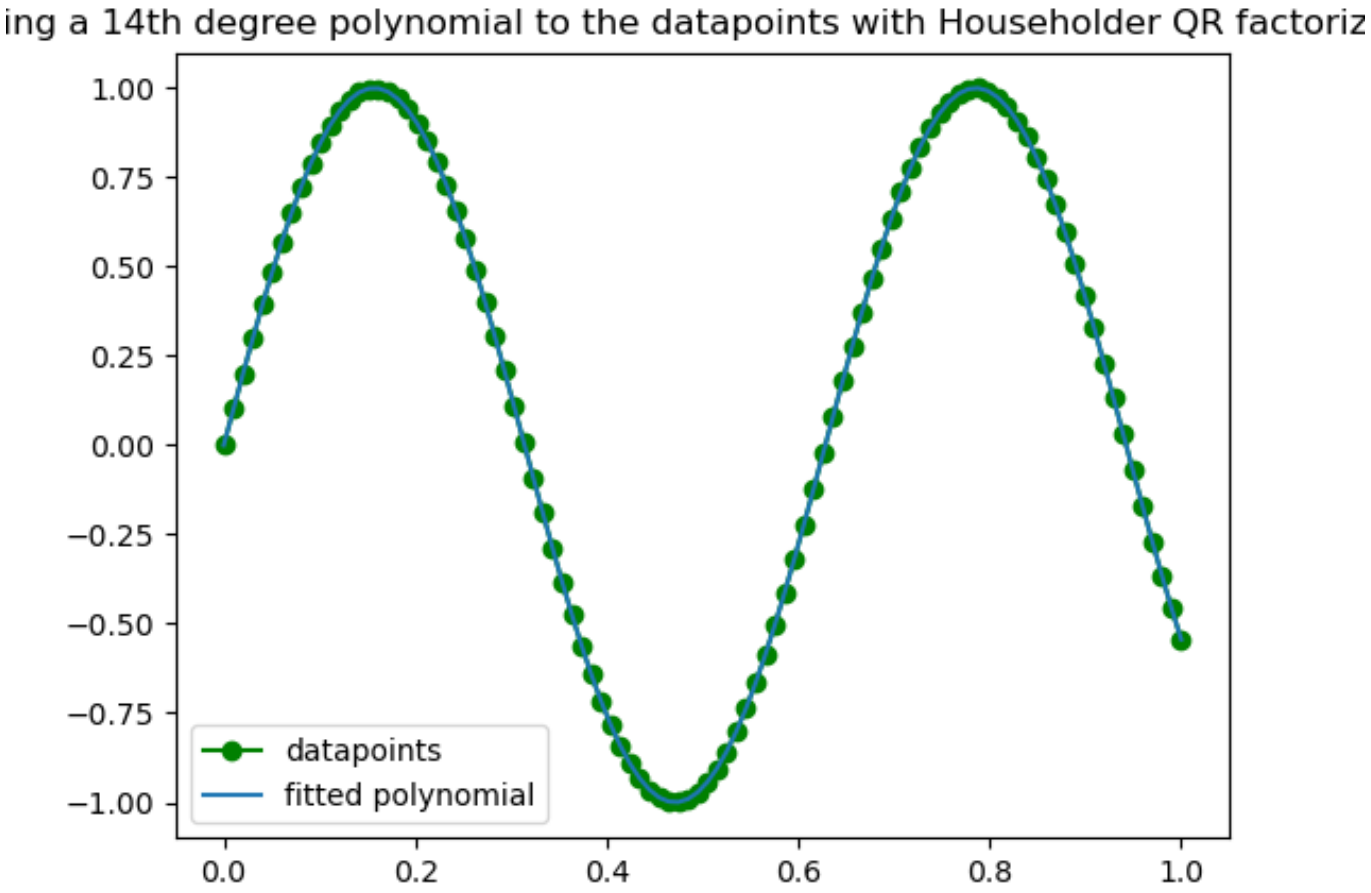

Figure 2: error= 66.47188248158425

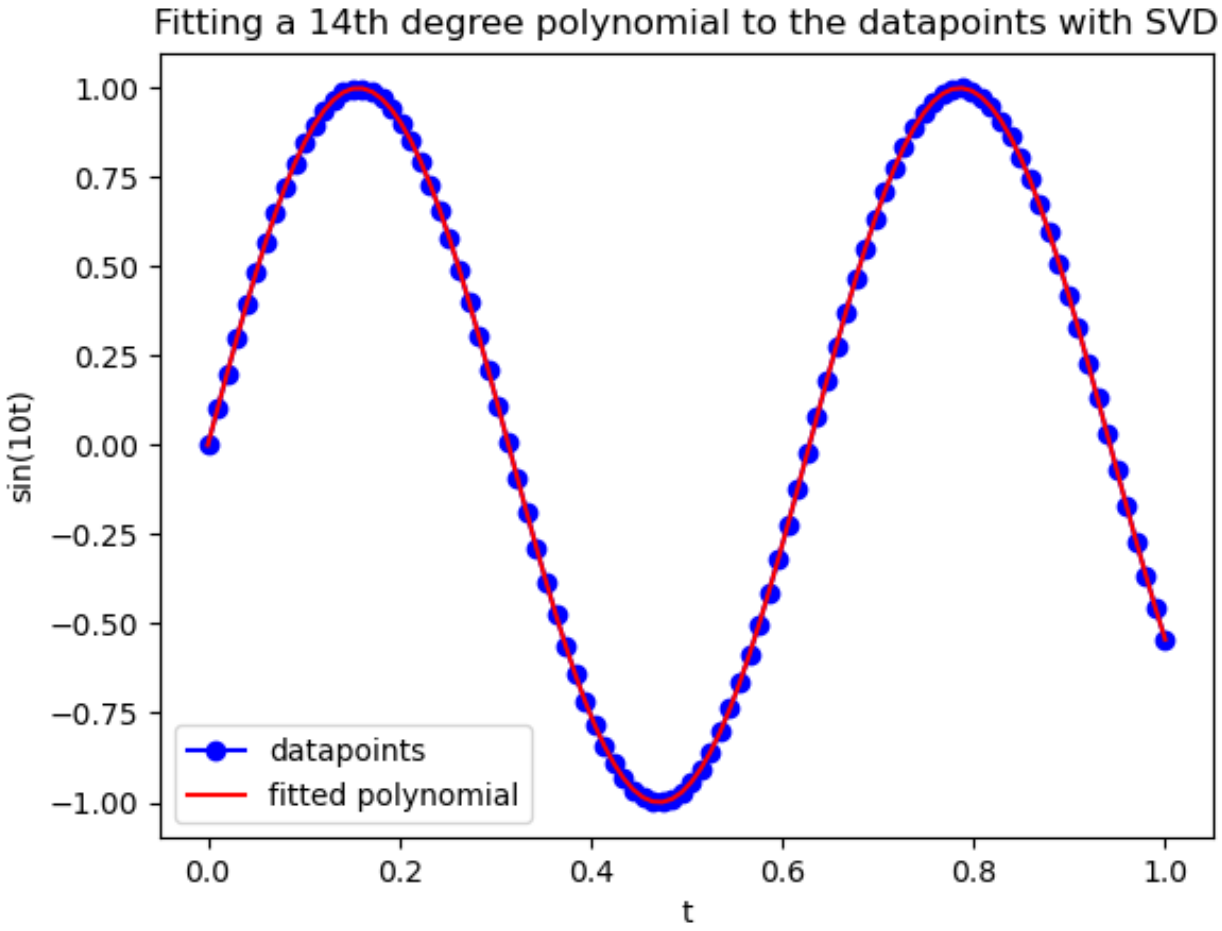

Figure 3: error= 66.47188248158271

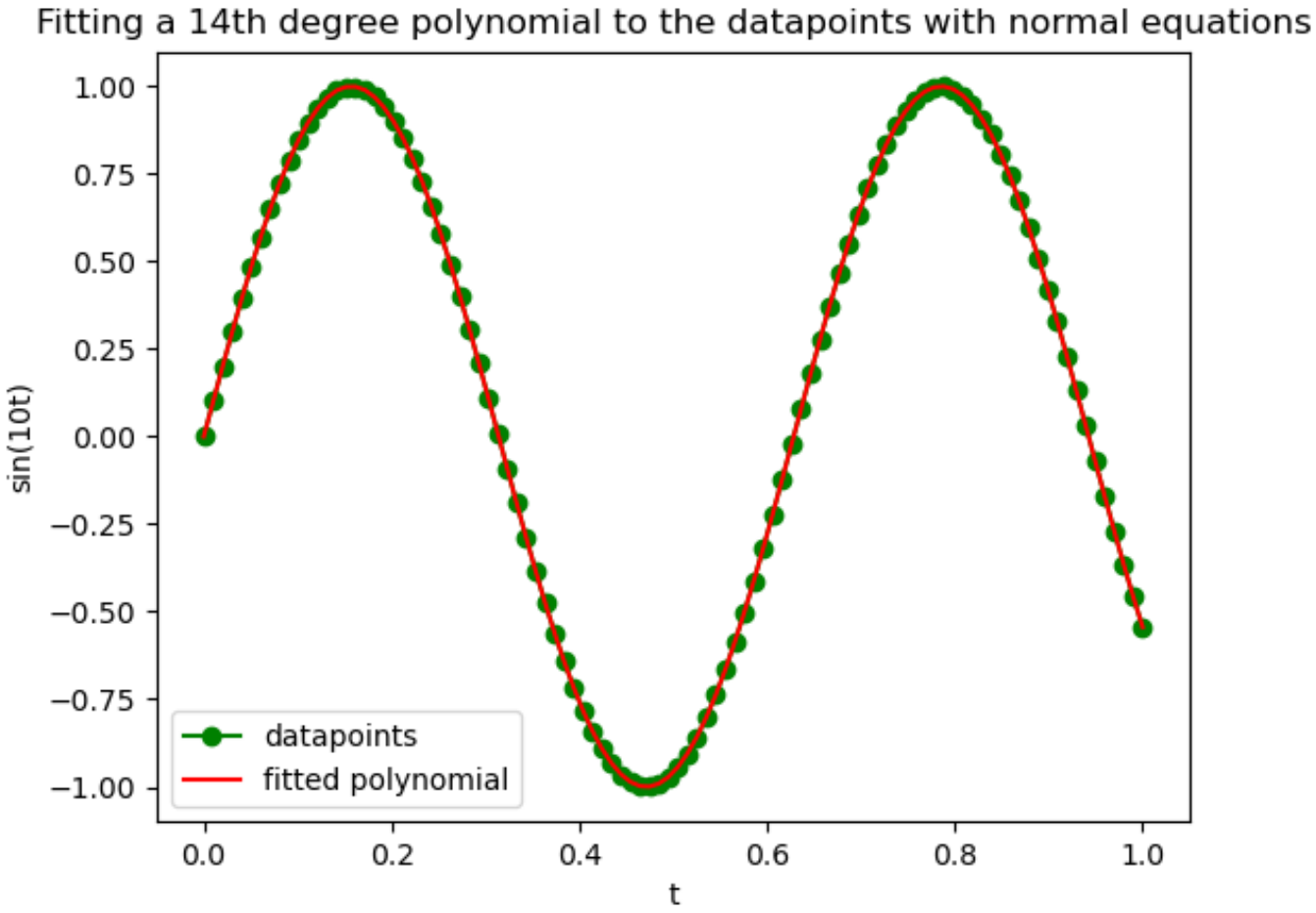

Figure 4: error= 66.47188275756871

maximum error is 66.47188275756871 occured in Normal equations.
minimum error is 66.47188248158271 occured in SVD.
Upto 6 digits after decimal in the values of error, its the same. Thus, we need to set the tolerance more than 10^{-6} to achieve high degree of accuracy to compare among the several methods for solving the least squares problem.