

Project 8B - Matrix Inversion

Due 4-1

The goal of this project is to find a least squares linear fit to some data. You will use the matrix method (which requires inverting a matrix) as discussed in class, $\vec{z}_{closest} = (A^T A)^{-1} A^T \vec{b}$, where $z = \begin{pmatrix} m \\ b \end{pmatrix}$.

1. In class: Data Collection. This part is meant to be fairly quick.
2. In class: Work out, by hand, the appropriate values of m and b using only your first 3 data points.
3. Add a function called 'invert' to your matrix class that returns a new matrix that is the inverse of your current matrix.
4. Using a combination of multiplications and inversions, computationally determine values for m and b.
5. Make a graph of your data along with your best fit line. Place this along with your cpp file into the P8 dropbox.

Due Monday, April 9th.