In this thesis, we were considering the similarities between data representation and system of linear equation. We divided the problem into overdetermined and underdetermined system. For overdetermined systems, We mentioned OLS method with QR decomposition, Theil-Sen estimator and minimizing the ℓ_1-norm using linear programming. For underdetermined systems, we applied OLS method. To select one unique solution, also we use Lasso method or ridge regressoin. An alternative approach includes stepwise methods or best subset regression.