GPU computing discussion group Jan 20 2012

Grant Schneider and John Lewis :

Consider a simple linear regression model $Y_i = \beta_0 + \beta_1 X_i + \epsilon_i$, i = 1, ..., N. The parameters β_0 and β_1 are estimated via the OLS method. Calculate the deleted t-residuals using the GPU.

Give an example with a large $(N \sim 1000000)$ data set. You may simulate X_i from some known distribution (e.g., Uniform or Gaussian) and assume that ϵ_i are iid Gaussian variables.