

## SDS 385 Topics Summary

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Exercise 01	Gradient Descent
	Newton's Method
Exercise 02	Stochastic Gradient Descent (SGD)
Exercise 03	Quasi Newton with Backtracking Line Search
Exercise 04	SGD with Adagrad
	SGD with Minibatch
	SGD with Adagrad and Sparse Matrix Functionality in RCPP Eigen
Exercise 05	LASSO & Soft Thresholding Examples
Exercise 06	LASSO using Proximal Gradient Descent
Exercise 07	LASSO using ADMM
Exercise 08	Spatial Smoothing using ADMM & Efficient (Tansey) ADMM
Exercise 09	Penalized Matrix Decomposition (Rank 1)