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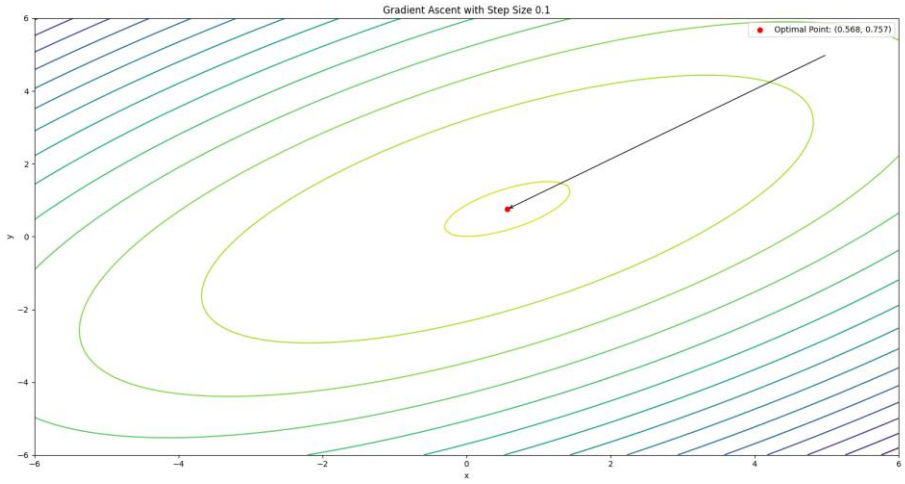
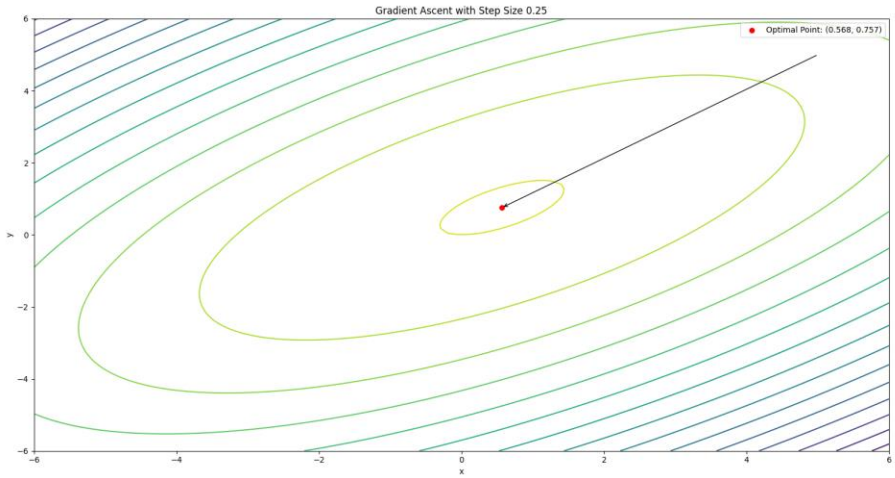
MEEN 357-505

Assignment 7

Task 1 Figures:





Task 1 Explanation:

Both algorithms converge to a relatively similar answer, when using a step size of .25 though the algorithm has a higher chance of exhibiting oscillations or divergence. Though with a much lower iteration size, the risk of not converging to a valid solution is higher. A smaller step size in this case generally leads to more stable convergence (though it will require more iterations). Choosing the right step size for gradient ascent is crucial. Having too large a step size can decrease the number of steps but will increase the chances of failure or incorrect solutions, too low of a step size results in high run times and convergence speed.