

## ROB313 ASSIGNMENT 3

Q1A. The objective is to find the log like-lihood of the given model with given values. This was answered on paper.

Q1B. The objective is to find the update rule using steepest descent GD and SGD with a MAP estimation. This was done on paper.

Q1C. The objective of this was to create a model for GD and SGD with the framework from the previous questions. My code is structured to create all the tables and display all the required values just from pressing run. The code includes everything for GD first then for SGD. Graphs and values can be found by opening my code and pressing run.

Q2A. The objective was to modify the forward pass function to implement a logsoftmax on its output. Modifications to the code can be seen under the comment “#Modification Below”.

Q2B. The objective was to modify the negative log likelihood function to implement a categorical likelihood. Modifications to the code can be seen under the comment “#Modification Below”.