Report

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I have added several functions in lab1.py. This document is intending to specify what these functions do.

Added function:

SendMessage(): Compute messages between two edges.

Collect(): Collect information from leaf to root, in a Depth first way.

Distribute(): Collect information from root to leaf.

ComputeMarginal: Compute final information with message collected.

SendMessgae_max(): Function is used in max-product algorithm. It only computes messages from leaf to root. Also a dictionary of maximum value of node $x_j|x_i$ is recorded. The product function is executed in a sum way.

Collect_max(): Collect information from root to leaf only with max marginalization.

Distribute_max(): Travel from root to node.

Set_Value(): find the maximum value from root to leaf in max-product algorithm.

Observe_evidence_max: This function is used to convert the probability to log probability.