

3. Mandatory for CSC645 students, optional for others: Consider applying the variable elimination algorithm to the umbrella DBN unrolled for three slices, where the query is $\mathbf{P}(R_3|u_1, u_2, u_3)$. Show that the space complexity of the algorithm – the size of the largest factor – is the same, regardless of whether the rain variables are eliminated in forward or backward order.
- [5 points]