**ITCS451, Semester 1/2024**

**Bayesian Network Project**

**Group members**

|  |  |  |  |
| --- | --- | --- | --- |
| **No.** | **Student ID** | **Student name** | **Section** |
|  |  |  |  |
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|  |  |  |  |

1. Description of the problem you are modeling.

[PUT YOUR ANSWER HERE]

1. Did you use real data? (10% extra credit)

🞏 Yes 🞏 No

If yes, describe your data in the following table.

|  |  |
| --- | --- |
| **Source of data** | [PUT YOUR ANSWER HERE] |
| **Type of data** | 🞏 raw data  🞏 published statistics |
| **Modification to the data (If any)** | [PUT YOUR ANSWER HERE] |

1. Bayes net description
   1. Explanation of structure

|  |  |
| --- | --- |
| What is your target node(s)? | [PUT YOUR ANSWER HERE] |
| Are there any relationships among the non-target nodes? Why are these needed? If not, why not? | [PUT YOUR ANSWER HERE] |

* 1. Bayes net screenshot

[PUT YOUR ANSWER HERE]

* 1. Explanation of your network nodes

|  |  |  |  |
| --- | --- | --- | --- |
| **No.** | **Node Name** | **Node Description** | **States** |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |
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|  |  |  |  |

1. Two examples of inference: Enter some evidence and show the updated probabilities of the target node(s). Explain what each example shows.

a. Example 1

* Describe the scenario.

[PUT YOUR ANSWER HERE]

* Screenshot (showing evidence entered and updated target node(s)):

[PUT YOUR ANSWER HERE]

* List evidence entered into the nodes

|  |  |  |
| --- | --- | --- |
| **No.** | **Node** | **Evidence (state)** |
| 1 |  |  |
| 2 |  |  |
| 3 |  |  |

* Explanation. Why does the result make sense?

[PUT YOUR ANSWER HERE]

b. Example 2

* + Describe the scenario.

[PUT YOUR ANSWER HERE]

* + Screenshot (showing evidence entered and updated target node(s)):

[PUT YOUR ANSWER HERE]

* + List the evidence entered into the nodes

|  |  |  |
| --- | --- | --- |
| **No.** | **Node** | **Evidence (state)** |
| 1 |  |  |
| 2 |  |  |
| 3 |  |  |

* + Explanation. Why does the result make sense?

[PUT YOUR ANSWER HERE]