CS343
Artificial Intelligence

Prof: Peter Stone

Department of Computer Science
The University of Texas at Austin
Good Afternoon, Colleagues
Good Afternoon, Colleagues

Are there any questions?
Logistics

- RL assignment due on Thursday
Logistics

- RL assignment due on Thursday
- Next week’s readings all due on Tuesday
Logistics

- RL assignment due on Thursday
- Next week’s readings all due on Tuesday
- More from survey:
  - Office hours limited
Logistics

- RL assignment due on Thursday
- Next week’s readings all due on Tuesday
- More from survey:
  - Office hours limited
  - 9pm deadline
Midterm

• **Raw scores** — Mean: 67.4, stdev: 16.2
Midterm

- **Raw scores** — Mean: 67.4, stdev: 16.2

- Made one adjustment
Midterm

• **Raw scores** — Mean: 67.4, stdev: 16.2

• Made one adjustment
  
  – Curved to set the mean to 80
Midterm

- **Raw scores** — Mean: 67.4, stdev: 16.2
- Made one adjustment
  - Curved to set the mean to 80
- **Revised scores** — Mean: 80.5, stdev: 9.7
Midterm

- **Raw scores** — Mean: 67.4, stdev: 16.2
- Made one adjustment
  - Curved to set the mean to 80
- **Revised scores** — Mean: 80.5, stdev: 9.7
- Due to the nature of the exam, was difficult to give partial credit
Midterm

- **Raw scores** — Mean: 67.4, stdev: 16.2
- Made one adjustment
  - Curved to set the mean to 80
- **Revised scores** — Mean: 80.5, stdev: 9.7
- Due to the nature of the exam, was difficult to give partial credit
- Questions?
Review

- Bayes’ nets
Noisy-OR

- Cold, flu, and malaria cause fever *independently*
Noisy-OR

- Cold, flu, and malaria cause fever independently
  - “Fever is false if and only if all its true parents are inhibited.”
Noisy-OR

- Cold, flu, and malaria cause fever *independently*
  - “Fever is false if and only if all its true parents are inhibited.”

- Leak node covers other causes
Noisy-OR

- Cold, flu, and malaria cause fever *independently*
  - “Fever is false if and only if all its true parents are inhibited.”

- Leak node covers other causes

- What if the inhibitions weren’t independent?
Noisy-OR

- Cold, flu, and malaria cause fever *independently*
  - “Fever is false if and only if all its true parents are inhibited.”
- Leak node covers other causes
- What if the inhibitions weren’t independent?
- Noisy-AND, Noisy-MAX
Noisy-OR

- Cold, flu, and malaria cause fever *independently*
  - “Fever is false if and only if all its true parents are inhibited.”

- Leak node covers other causes

- What if the inhibitions weren’t independent?

- Noisy-AND, Noisy-MAX
  - Exercise 14.8
Inference

- \( P(X|e), e \in E \)
Inference

• $P(X|e), e \in E$
  
  – Anything not in $X \cup E$ is a hidden variable
Inference

- $P(X|e), e \in E$
  - Anything not in $X \cup E$ is a hidden variable

- Is exact inference used in practice?
Inference

- \( P(X|e), e \in E \)
  - Anything not in \( X \cup E \) is a hidden variable

- Is exact inference used in practice?
  - Variable elimination is used, but tricky
Inference

- \( P(X|e), e \in E \)
  - Anything not in \( X \cup E \) is a hidden variable

- Is exact inference used in practice?
  - Variable elimination is used, but tricky

- Inference by enumeration
Inference

- $P(X|e), e \in E$
  - Anything not in $X \cup E$ is a hidden variable

- Is exact inference used in practice?
  - Variable elimination is used, but tricky

- Inference by enumeration
  - Exam question 4 review