

# **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 Thursday

# Preliminaries

---

- Propositional vs. first-order representations

# Review

---

- Bayes' nets
- Reduncancy vs. guaranteed consistency (P. 515)

# Review

---

- Bayes' nets
- Reduncancy vs. guaranteed consistency (P. 515)
- Markov Blanket



# 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