

6.871 Reading Summary: Lecture 17

Due Thur, April 13, 9:35am

Lecture 17: Case-Based Reasoning

Please answer the following questions in at most one page.

Papers:

Kolodner, J.L. and Leake, D.B., A Tutorial Introduction to Case-Based Reasoning

Slade S., Case-Based Reasoning: A Research Paradigm

Hinkle D. and Toomey C, Applying case-based reasoning to manufacturing

Koton P., A medical reasoning program that improves with experience

Chi R, et. al., Generalized Case-Based Reasoning System for Portfolio Management

Porter B, Bareiss R, Holte R, Concept learning and heuristic classification in weak-theory domains

1. What is case-based reasoning? Under what circumstances is it a good choice of paradigm?
2. Give two examples from the papers of combining case-based reasoning with another form of reasoning (e.g. model-based reasoning). Why were the techniques combined? What was gained?
3. How does the Porter system differ from the systems described in the other papers? Why was that form of reasoning chosen?