

Übungen zur Vorlesung: Wissensbasierte Systeme

Blatt 7

Exercise 7.1

Suppose you have the following facts and possible hypotheses for an abductive reasoning system:

$H = \{\text{walking, hunting, robbing, banking}\}$

$F = \{\text{goto(forest)} \leftarrow \text{walking,}$
 $\text{get(gun)} \leftarrow \text{hunting,}$
 $\text{goto(forest)} \leftarrow \text{hunting,}$
 $\text{get(gun)} \leftarrow \text{robbing,}$
 $\text{goto(bank)} \leftarrow \text{robbing,}$
 $\text{goto(bank)} \leftarrow \text{banking,}$
 $\text{false} \leftarrow \text{puton(goodShoes)} \wedge \text{goto(forest)}\}$.

- (a) Suppose you observe get(gun) . What are all of the minimal explanations for this observation?
- (b) Suppose you observe $\text{get(gun)} \wedge \text{goto(bank)}$. What are all of the minimal explanations for this observation?
- (c) Is there something that could be observed to remove one of these explanations?

Exercise 7.2

Select a domain and construct a natural example with two sets of instances of defaults that are consistent, but contradict each other. For the domain, which should be preferred?

Exercise 7.3

Why should you prefer more specific defaults over more general defaults?