



# training-common-sense day 5

<http://10.9.8.7:9001/p/training-common-sense-pattern-readme-plus.md>

## reference

<http://10.9.8.7:9001/p/training-common-sense-day-5>

ConceptNet --> <http://conceptnet5.media.mit.edu/>

- still active

- project is being developed since 2003

A good introductory document on the project (with context) :

BT Technology Journal • Vol 22 No 4 • October 2004

211

ConceptNet — a practical commonsense reasoning tool-kit

<http://web.media.mit.edu/~push/ConceptNet-BTTJ.pdf>

"ConceptNet is a freely available commonsense knowledge base and natural-language-processing tool-kit which supports many practical textual-reasoning tasks over real-world documents including topic-gisting, analogy-making, and other context oriented inferences. The knowledge base is a semantic network presently consisting of over 1.6 million assertions of commonsense knowledge encompassing the spatial, physical, social, temporal, and psychological aspects of everyday life. ConceptNet is generated automatically from the 700 000 sentences of the Open Mind Common Sense Project — a World Wide Web based collaboration with over 14 000 authors"

page 2 :

"The size and scope of ConceptNet make it comparable to, what are in our opinion, the two other most notable large-scale semantic knowledge bases in the literature: Cyc and WordNet. However, there are key differences, and these will be spelled out in the following section. **While WordNet is optimised for lexical categorisation and word-similarity determination, and Cyc is optimised for formalised logical reasoning, ConceptNet is optimised for making practical context-based inferences over real-world texts.** "

...

"ConceptNet is also unique from Cyc and WordNet for its **dedication to contextual reasoning.**"

## Certifying and removing disparate impact\*

***What does it mean for an algorithm to be biased?*** In U.S. law, unintentional bias is encoded via disparate impact, which occurs when a selection process has widely different outcomes for different groups, even as it appears to be neutral. This legal determination hinges on a definition of a protected class (ethnicity, gender) and an explicit description of the process. When computers are involved, determining disparate impact (and hence bias) is harder. It might not be possible to disclose the process. In addition, even if the process is open, it might be hard to elucidate in a legal setting how the algorithm makes its decisions. Instead of requiring access to the process, we propose making inferences based on the data it uses. We present four contributions. First, we link disparate impact to a measure of classification accuracy that while known, has received relatively little attention. Second, we propose a test for disparate impact based on how well the protected class can be predicted from the other attributes. Third, we describe methods by which data might be made unbiased. Finally, we present empirical evidence supporting the effectiveness of our test for disparate impact and our approach for both masking bias and preserving relevant information in the

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