4 Nouns

Nouns are usually easy. If you don’t know a word, you can check it from a dictionary – just be careful that the meaning is what you want.

Often a better way is to move a term from your passive vocabulary to the active one – then you known also the use context!

4.1 Plural forms

4.1.1 Irregular plural forms

<table>
<thead>
<tr>
<th>Singular</th>
<th>Plural</th>
</tr>
</thead>
<tbody>
<tr>
<td>half</td>
<td>halves</td>
</tr>
<tr>
<td>life</td>
<td>lives</td>
</tr>
<tr>
<td>axis – axes</td>
<td>axes</td>
</tr>
<tr>
<td>child</td>
<td>children</td>
</tr>
<tr>
<td>person</td>
<td>people</td>
</tr>
<tr>
<td>automaton</td>
<td>automata</td>
</tr>
<tr>
<td>vertex</td>
<td>vertices</td>
</tr>
<tr>
<td>analysis</td>
<td>analyses</td>
</tr>
<tr>
<td>thesis</td>
<td>theses</td>
</tr>
<tr>
<td>basis</td>
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<tr>
<td>series</td>
<td>series</td>
</tr>
<tr>
<td>medium</td>
<td>media</td>
</tr>
<tr>
<td>criterion</td>
<td>criteria</td>
</tr>
<tr>
<td>phenomenon</td>
<td>phenomena</td>
</tr>
</tbody>
</table>

Data is originally the plural form of datum, but nowadays it is frequently used as a singular word. The same holds for hypermedia. ”The data is bi-assed”, ”Hypermedia offers a new way to implement learning environments”

Notice also:

- If the suffix is \{-s,-ss,-sh,-ch,-x,-z\} in singular $\rightarrow$ -es in plural, e.g. research – researches, approach – approaches, quiz – quizzes
- The same happens with most words which have suffix -o, unless the word is abbreviated or of foreign origin. E.g. cargo – cargoes, but photo – photos, dynamo – dynamos
- After consonant -y changes to -ies in plural. E.g. floppy – floppies.
4.1.2 Singular words which look like plural forms

The names of disciplines: mathematics, statistics, physics.
"Statistics is the precessor of data mining."

news is also singular!
"Good news is that the algorithm works in $O(n)$ time"

4.2 Countable and uncountable nouns

Countable nouns (C-words) refer to things which can be counted, while things referred by uncountable nouns cannot be counted. Uncountable nouns (U-words) can be divided into three groups:

1. Words expressing material: water, air, wood, ...

2. Abstract words: life, time, work, strength, ...

3. Exceptional: advice, information, news, equipment, money

Notes

• Uncountable words are missing the plural form!

• Notice that sometimes a noun can be either a countable or an uncountable word depending on the meaning. E.g. science (when you refer generally to natural sciences) – a science (when you refer to a discipline).

• The words in group 3 are grammatically singular but they have also plural meaning. If you want to refer to a singular piece you have to express it in another way: "a piece of information", "an item of news", "a bit of advice".

"This information is important"! "All advice is good!"

4.3 Extra: differences between British and American English

Some nouns have different spelling in British and American English. Try to use systematically either British or American forms!
We will return to other differences in the end of course.
<table>
<thead>
<tr>
<th>British</th>
<th>American</th>
</tr>
</thead>
<tbody>
<tr>
<td>colour</td>
<td>color</td>
</tr>
<tr>
<td>neighbour</td>
<td>neighbor</td>
</tr>
<tr>
<td>behaviour</td>
<td>behavior</td>
</tr>
<tr>
<td>favour</td>
<td>favor</td>
</tr>
<tr>
<td>honour</td>
<td>honor</td>
</tr>
<tr>
<td>metre (unit)</td>
<td>meter</td>
</tr>
<tr>
<td>meter (device)</td>
<td>center</td>
</tr>
<tr>
<td>centre/center</td>
<td>analogue</td>
</tr>
<tr>
<td>dialogue</td>
<td>dialog</td>
</tr>
<tr>
<td>encyclopaedia</td>
<td>encyclopedia</td>
</tr>
<tr>
<td>argument</td>
<td>argument</td>
</tr>
<tr>
<td>judgement</td>
<td>judgment</td>
</tr>
<tr>
<td>programme (academic, tv)</td>
<td>program</td>
</tr>
<tr>
<td>program (computer)</td>
<td>program</td>
</tr>
<tr>
<td>defence</td>
<td>defense</td>
</tr>
<tr>
<td>practice (noun)(^1)</td>
<td>practise</td>
</tr>
<tr>
<td>maths</td>
<td>math</td>
</tr>
<tr>
<td>speciality</td>
<td>specialty</td>
</tr>
</tbody>
</table>

### 5 Compound words

The practices vary, and it is hard to give exact rules when words should be written together, with a hyphen −, or separately.

- If the words have become one concept, they are usually written together, e.g. "software", "keyboard", "database"

- If the independent meaning of words is emphasized, they are hyphenated, e.g. "non-smoker" (cs example?)

- Hyphen is often used when the concept consists of more than two words: "depth-first search", "between-cluster variation", "feed-forward neural network", "first-order logic"

- Multiple word adjectives are usually hyphenated, e.g. "data-driven", "model-based", "class-conditional"

- If the first part is a symbol or an abbreviation, the word is hyphenated, e.g. "NP-complete", "k-nearest neighbour method", "3-dimensional".
Some common phrases have become compound words in American English, but remained as phrases in British English. E.g. in American English you can spell "trademark", but in British English "trade mark" or "trade-mark". (cs example?)

Notice that many words which are compound in your mother tongue are written separately in English: "data set", "density function", "wave length" (this is typical especially for long words)

Problem: how should we spell the following computer science terms? overfitting, nondeterministic, time demanding, drop-out, EM-algorithm

6 Articles

6.1 Position

Basic rule: before the noun phrase (a noun + preceeding attributes)

Exceptions:

1. \{what, such, quite, rather, half\} + a/an + noun phrase

"Half an hour", "quite a fast system"

(In American English the rules are not so strict concerning quite, rather, and half.)

2. \{too, as, so, how, however\} + adj. + a/an + noun

"Too great a distance", "so long a time", "as big a difference"

3. \{all, both, double, twice, half\} + the + noun

"All the methods", "twice the time", "double the amount"

6.2 Use of articles

Basic rules:
6.2.1 Definite and indefinite concepts

A concept is indefinite, when you mention it first time, and it is not clear from the context. Usually this kind of expressions are describing: "There was a time delay between processes A and B."

It is definite, when

- you mention it again ("The time delay was about 10 ms")
- the context defines what you mean ("The left-most bit is always 1.", "The result of process A were correct.")
- the concept is familiar to everybody (the Earth, the sun, the moon)

Usually this kind of expressions are defining: "The delay between two processes $P_1$ and $P_2$ is $t_{end}(P_1) - t_{start}(P_2)$.”

6.2.2 When you refer to an indefinite concept

a singular C-word → a/an
a plural C-word + positive clause → some
a plural C-word + negative or interrogative clause → any
a U-word + pos. clause → some
a U-word + neg. or interr. clause → any

6.2.3 When you refer to something generally

a plural C-word or a U-word → no article

"Students need time to process new information"
6.2.4 When you refer to the whole class

A singular C-word → a/an

"The computer cannot solve all problems"
(which means that none of the computers can solve all problems, the property
concerns the class of all computers)

6.2.5 Exceptional expressions

Sometimes you can use a/an article with an abstract word:

- when the word is proceeded by a describing relative clause "There is a
danger that the model overfits"
- expressions "a /short/long time", "a while"

6.2.6 The article with ordinal numbers and some adjectives

Definite article "the" is used

- when the noun is preceeded by an ordinal number ("The first attribute
describes...")
- when the noun is preceeded by an adjective expressing order ("the next
attribute", "in the following chapter")
- with adjectives same, only, right, wrong ("The results were the same",
"The only model which has this property is X")

Notice: "the" is not used with ordinal numbers or adjective "last", when
you refer to the performance in a competition ("Program X came first and
program Y was last when the programs were compared by the Z test.)

Task: Try to draw a complete decision tree for selecting articles (and modi-
fiers some/any)!