5118008 English for Software Developer

Conjunction

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Conjunction

- Conjunctions link words, phrases or clauses together
  - make it possible to compose complex sentences
  - phrases linked with a conjunction must share the same structure (i.e., parallel)
    - Correct: This task is tedious and time-consuming.
    - Incorrect: I like running and to play tennis.

- Different types of conjunctions
  - coordinating conjunction: for, and, but, so, etc.
  - correlative conjunction: both/and, either/or, whether/or, etc.
  - subordinating conjunction: as, because, if, though, while, etc.

Coordinating Conjunction

- Connect multiple grammatical elements having the same type/level in a sentence
  - FANBOYS: for, and, nor, but, or, yet, and so
  - use comma between two clauses when they are joined

- Examples
  - The following questions are designed to elicit information that may help researchers and practitioners to create alternative datasets with similar characteristics.
  - Industrial robots are an example of autonomous yet nonadaptive machines: they execute the same sequence of actions repeatedly.
  - This type of knowledge is not (and cannot be) learned from data, for we do not have access to an infinite number of examples, nor do we have an infinite amount of time

But vs. And

- “but” basically negates what has just spoken.
  - e.g., I thought it was over, but it turned out to be not.
  - e.g., Tom is not here, but Mary is.

- “but” is often misused to contrast two things that are true at the same time
  - e.g., She is poor but she is honest.
  - e.g., I used to love you, but now I don’t.

- Use “and”, not “but”, when the two things can be true

Correlative Conjunction (1/2)

- Pairs of conjunctions working together.
  - e.g., either/or, neither/nor, whether/or, not only/but also
  - emphasize the relationship between the joined elements (stronger than what coordinating conjunction does)

- Examples
  - We created Alive, a domain-specific language for writing optimizations and for automatically either proving them correct or else generating counterexamples.
  - Customers who are happy with your products are more likely to not only keep using them but also promote them to others, thereby boosting organic growth.

Correlative Conjunction (2/2)

- Parallelize the elements of the same type
  - Bad: Jeremy not only won a trophy but also money.
  - Good: Jeremy won not only a trophy but also money.
  - Bad: Either you must bring in your permission slip or stay home.
  - Good: You must either bring in your permission slip or stay home.
  - Good: Either you must bring in your permission slip, or you must stay home.

Subordinating Conjunction

- Join independent and dependent clauses and signal a cause-effect, a contrast, or other kind of relationship between the clauses.
  - e.g,. because, since, as, although, while, etc.
  - e.g., until, after, before (these adverbs work as conjunction)

- A subordinating conjunction is placed at the beginning of a dependent clause.
  - use a comma when the dependent clause precedes the independent clause

Examples

- Because Java uses garbage collection, Java programs are not susceptible to use-after-free bugs.
- Although the compiler or interpreter ignores all comments in a program, comments are valuable.
- People often treat open source packages as if they were packaged commercial software.
- While these guidelines come from an educational environment, they are designed to be useful to practitioners as well.
- When we design an algorithm we are designing a way to control any machine that implements the model, in order that the machine produces a desired effect in the world.

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Transition Words

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Transition Words

- Transition words helps words/sentences move from one topic to another without confusing the reader

- Different types
  - introduce, agree, add on
  - oppose, limit, contrast
  - cause and condition
  - effect and result
  - example and support
  - conclusion and summary

Introduce, Agree and Add-on

- In addition (to)
- Moreover
- Furthermore
- Likewise
- Equally important
- Too
- Coupled with

Introduce, Agree and Add-on

- Today, such language models are derived from the statistics of large corpora with as many as 10^{10} sentences of text. Moreover, in practical systems for machine translation or speech recognition, they may assign probabilities to sequences that contain as many as 10^{6} distinct words.
- We have encountered units and elementary dimensional analysis in our high school science classes. For instance, the mass of an object is expressed in kilograms (kg). Likewise, length is expressed using meters (m) and time in seconds (s).
- Robust encryption algorithms, coupled with secure storage of the encryption keys, are critical to ensure data protection.
- In addition to the energy, raw material, and water use during the production and operation of a device, there is the question of what happens to it at the end of its lifetime.

Oppose, Limit and Contrast

- Unlike
- Or
- Conversely
- On the contrary
- Above all
- Notwithstanding
- Despite

Oppose, Limit and Contrast

- Unlike traditional AI approaches based on explicit rules expressing domain knowledge, machine learning often lacks explicit human-understandable specification of the rules producing model outputs.
- If your traditional approach to data management has been based on spreadsheets, you may view gigabytes as big data. Conversely, if you are operating a social network site or a major search engine, big has an entirely different meaning, where a petabyte is often the smallest unit of measure worth discussing.
- Assistive technologies (AT) are created to bridge this gap. In the past, physical ATs tended to be bulky, expensive, and not designed with social acceptability in mind. Mobile devices, on the contrary, can be used in a variety of contexts to assist people.

Oppose, Limit and Contrast

- Distributed systems can be especially difficult to program for a variety of reasons. They can be difficult to design, difficult to manage, and, above all, difficult to test.
- Numerous breakthroughs in cryptography, secure coding, and formal methods notwithstanding, cybersecurity is getting worse as we watch.
- Multiple language indexes have shown a decline in R's popularity, despite growth in machine learning.