

7 Ethics and Ownership – Part 1

Name: _____ Class: _____ Date: _____

Vocabulary 词汇

Write each word three times. 把每个单词抄写三遍。

English	中文	Write it 3 times (English)		
Ethics	伦理	_____	_____	_____
privacy	隐私	_____	_____	_____
Intellectual property	知识产权	_____	_____	_____
Copyright	版权	_____	_____	_____
patent	专利	_____	_____	_____
software licence	软件许可证	_____	_____	_____
open-source	开源	_____	_____	_____
freeware	免费软件	_____	_____	_____
shareware	共享软件	_____	_____	_____
Artificial intelligence	人工智能	_____	_____	_____
bias	偏见	_____	_____	_____

Recall

Computers raise questions of right and wrong, and of who owns software and data. You have used apps, games and websites made by other people.

At AS we look at ethics, at owning software (licences), and a little about artificial intelligence.

New ideas

Read these first. Each idea has a short worked example. Then do the Practice.

■ 1 Ethics and privacy

Ethics 伦理 means acting responsibly with computers —protecting people’s **privacy** 隐私, keeping data safe, and not using it in ways people did not agree to.

Worked example. A fitness app that quietly sells users’ location data to advertisers breaks their privacy —even if the app itself works perfectly.

■ 2 Owning software and ideas

Intellectual property 知识产权 is something a person created with their mind — a program, a design, a song.

- **Copyright** 版权 protects a created work (it applies automatically).
- A **patent** 专利 protects a new invention.
- A **software licence** 软件许可证 sets out how you may use a program:
 - **open-source** 开源—the source code is shared and may be changed and re-shared;
 - **freeware** 免费软件—free to use, but the source code is not shared;
 - **shareware** 共享软件—free to try for a limited time, then you pay.

Copyright

automatic — no need to apply
protects works: code, text,
images, music
lasts a long time

Patent

must be applied for
protects an invention
or process
lasts about 20 years

proprietary
pay to use
source closed

shareware
try free,
then pay

freeware
free to use
source closed

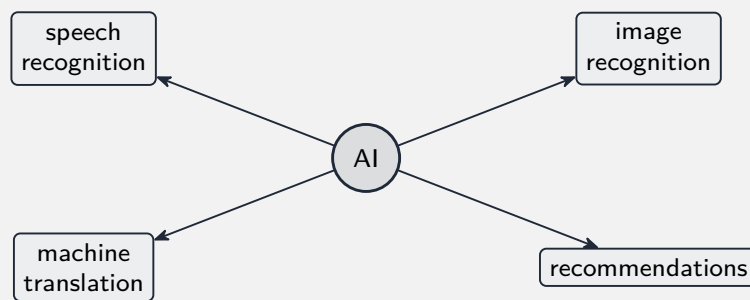
open-source
free
source shared

Worked example. With an open-source program you may read its code, change it, and share your version; with freeware you may use it for free but cannot see or change the code.

Watch out: "free to use" (freeware) is not the same as "open-source" —freeware is still free, but it keeps its source code hidden.

■ 3 Artificial intelligence

Artificial intelligence 人工智能 lets a computer learn patterns from data and make decisions. It is powerful and useful, but it can show **bias** 偏见 if the data it learns from is unfair or incomplete.



Worked example. A face-recognition system trained mostly on one group of faces may work poorly on others —that unfair result is bias coming from the training data.

Practice

7.1 State what is meant by intellectual property. [1]

7.2 Explain what is meant by bias in an AI system. [1]

7.3 State what each of copyright and a patent protects. [2]

7.4 Give one difference between open-source software and freeware. [2]

7.5 Give one ethical concern about a company collecting people's personal data. [2]

7.6 A student copies an open-source library into their project but removes the author's name and licence. Explain why this is wrong, even though the code was free to use. [2]

7.7 Challenge. A hospital wants to use AI to decide which patients to treat first. Give one benefit and one ethical risk. [2]
