Python package version convention:

The "package==3.10.1" format in Python packages represents different levels of changes:

- MAJOR = backward-incompatible updates
- MINOR = backward-compatible new features
- PATCH = backward-compatible bug fixes

What does it mean? 👉

package==3.10.1

MAJOR.MINOR.PATCH

MAJOR version updates are incremented when there are backward-incompatible changes. Upgrading major versions can pose significant challenges in large projects. It's vital to have a clear strategy for risk mitigation and smooth transitions.

package==3.10.1

MAJOR.MINOR.PATCH

MINOR version updates are incremented when functionality is added in a backward-compatible manner. Minor updates play a key role in the evolutionary development of a package.

package==3.10.1

MAJOR.MINOR.PATCH

PATCH, also often termed MICRO in Python, version updates are incremented for backward-compatible bug fixes. Patch versions focus on enhancing stability and performance of the software without altering existing functionalities.

Additional labels

Pre-release and build metadata are available as extensions to the convention

MAJOR.MINOR.PATCH

It includes versions like alpha, beta, and release candidates offering insights into upcoming features and changes, allowing for early testing and feedback. For example:

1.0.0-alpha, 1.0.0-beta, 1.0.0-001

For more version conventions:

Python Improvement Proposal - 0440

https://peps.python.org/pep-0440/

Karl-Fredrik M. Hagman