15 Glossary

Anaconda: A Python distribution with many scientific packages pre-installed.

Arguments/Parameters: Values passed into functions.

Biopython: A collection of Python tools for computational biology.

bool: Boolean (True or False)

break: Exits the current loop.

Comment: Non-executable text in Python, marked with #, used to describe code.

continue: Skips the rest of the loop and goes to the next iteration.

float: Decimal number, e.g., 3.14

Function: Reusable block of code defined with def.

IDE (Integrated Development Environment): Tools like PyCharm, VS Code, or Thonny used to write and debug Python code.

if/elif/else: Conditional execution.

Indentation: Spaces used to define code blocks (e.g., in functions, loops).

int: Integer, e.g., 5

Interpreter: A program that executes Python code line by line.

Jupyter Notebook: An interactive coding environment ideal for step-by-step data analysis.

list: Ordered, mutable collection. [1, 2, 3]

Module: A file containing Python definitions and functions.

Open-source: Python is freely available, and users can modify the source code.

pass: Placeholder that does nothing.

pip: Python's package installer used to install libraries.

Python: A high-level, interpreted programming language known for its readability and wide applicability in scientific research, data analysis, and automation.

Reproducibility: Python allows writing scripts that can be shared and reused.

Return: Sends a value back from a function.

Script: A file containing Python code (.py) meant to be run as a program.

set: Unordered collection of unique elements. {1, 2, 3}

Statement: A line of code that performs an action.

str: String (text), e.g., "DNA"

Third-Party Modules: Installed via pip, e.g., numpy, biopython

tuple: Ordered, immutable collection. (1, 2, 3)

Variable: A named storage location for a value. Example: gene = "lacZ"

16 References

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