Python psutil Module - Notes

# 🔹 Purpose

The psutil (process and system utilities) module allows access to information on running processes and system utilization (CPU, memory, disks, network, sensors). It is widely used in system monitoring, profiling, and DevOps automation.

# 📦 Installation

Install with pip:

pip install psutil

# 🧠 CPU Information

* psutil.cpu\_times() – Return CPU times as a named tuple
* psutil.cpu\_percent(interval=1) – Return CPU usage percentage
* psutil.cpu\_count() – Return number of logical CPUs
* psutil.getloadavg() – Get system load average (Unix only)

# 🧵 Memory Information

* psutil.virtual\_memory() – Return system memory usage statistics
* psutil.swap\_memory() – Return swap memory statistics

# 💾 Disk Usage and Partitions

* psutil.disk\_partitions() – Return mounted disk partitions
* psutil.disk\_usage(path) – Return disk usage statistics for the given path
* psutil.disk\_io\_counters() – Return disk I/O statistics

# 🌐 Network Information

* psutil.net\_io\_counters() – Return network I/O statistics
* psutil.net\_connections() – Return network connections
* psutil.net\_if\_addrs() – Return network interfaces and addresses
* psutil.net\_if\_stats() – Return network interfaces statistics

# 🔍 Process Management

* psutil.pids() – Return list of PIDs
* psutil.Process(pid) – Get process object by PID
* proc.name(), proc.status() – Process name, status
* proc.cpu\_percent(), proc.memory\_info() – CPU and memory usage of process

# 🚀 Common Use Cases

* System health monitoring
* Building custom performance dashboards
* Automating alerts based on resource usage
* Killing or managing rogue processes