

硬件环境要求:

- **CPU:** x86-64 架构, 多核 (建议 4 核及以上)
- **内存:** ≥8 GB RAM
- **存储:** ≥1 GB 可用磁盘空间用于安装及缓存
- **显示:** 支持基本 2D/3D 图形加速 (用于 PyQt5 界面渲染)

软件环境要求:

- **操作系统:** Windows 10/11, macOS 10.15+ 或任意主流 Linux 发行版
 - **Python:** 3.8 及以上版本
 - **Python 库依赖:**
 - PyQt5
 - Biopython
 - numpy
 - pandas
 - scikit-learn
 - seaborn
 - matplotlib
 - python-docx
 - qrcode
 - pillow
-

Hardware Requirements:

- **CPU:** x86-64, multi-core (4 cores or more recommended)
- **Memory:** ≥ 8 GB RAM
- **Storage:** ≥ 1 GB free disk space for installation and caching
- **Display:** Basic 2D/3D acceleration support for PyQt5 GUI rendering

Software Requirements:

- **OS:** Windows 10/11, macOS 10.15+ or major Linux distributions
- **Python:** Version 3.8 or higher
- **Dependencies:**
 - PyQt5
 - Biopython

- numpy
- pandas
- scikit-learn
- seaborn
- matplotlib
- python-docx
- qrcode
- pillow