MLP

1. what are the pros and cons of python?

Pros of python

*. Easy to learn and read
 - Python's syntax is simple and close to natural language.

*. Extensive Libraries and Frameworks
 - Huge ecosystem: NumPy, Pandas, Flask etc. —

*. Cross-platform compatibility
 - works on windows, MacOS, linux

*. Strong community support
 - Excellent documentations and stack overflow.

*. Ideal for Rapid Development and prototyping.
 - you can build functional applications quickly.

*. Great for Data Science and Machine learning
 - Integrates well with Jupyter Notebooks.

*. Integration and Automation
 - Excellent for scripting.

Cons of Python

*. Slower Execution speed
- Not ideal for performance-critical application.

*. High Memory usage
- Dynamic typing and object overhead consume more memory.

*. Not ideal for Mobile Development

*. Global Interpreter Lock (GIL)

*. Runtime errors Due to Dynamic Typing

*. Dependency Management Issues.

2, History of Python in Short Note

*. <u>Creator</u>: Python was created by Guido Van Rossum in the late 1980s.

*. <u>Origin</u>: He started developing it in December 1989 at CWI (Centrum Wiskunde and Infromatica) in the Netherlands.

*. <u>Purpose</u>: Guido wanted a simple, readable Scripting language to replace ABC language and handle System Administration tasks.

*. <u>First release</u>: Python 1.0 was officially released in 1991, featuring exceptions, functions, and core data types like lists and strings.

*. <u>Python 2.0 (2000)</u>: Introduced garbage collection and unicode support. However, it was later discontinued in 2020.

*. <u>Python 3.0 (2008)</u>: A Major overhaul that improved Consistency and performance but was not backward Compatible with python 2.

*. <u>Current Status</u>: python is one of the most popular programming language today, widely used in AI, data Science, web development, and automation.

*. <u>Guiding philosophy</u>: Based on "The Zen of python" which emphasizes simplicity, readability, and elegance.