

Prerequisites:

- Python 3.9 at minimum is installed
- Scapy installed
 - Pip install scapy
- Clone the repository
 - Git clone <repo-url>
 - Cd osi-encapsulation-explorer

Running

- Visualize Encapsulation
 - Python osi_explorer.py simulate --payload "Hello, OSI!"
- Visualize Decapsulation
 - Python osi_explorer.py simulate --payload "Hello" --direction up
- Generate PCAP(basic synthetic headers)
 - Python osi_explorer.py pcap --payload "PCAP demo" --out demo.pcap
- Generate PCAP(advanced realistic headers)
 - Python osi_explorer.py pcap --payload "Advanced PCAP" --out advanced.pcap
--advanced --proto tcp --src-ip 10.0.0.1 --dst-ip 10.0.0.2 --src-port 12345
--dst-port 80
- Show OSI vs TCP/IP Comparison
 - Python osi_explorer.py compare