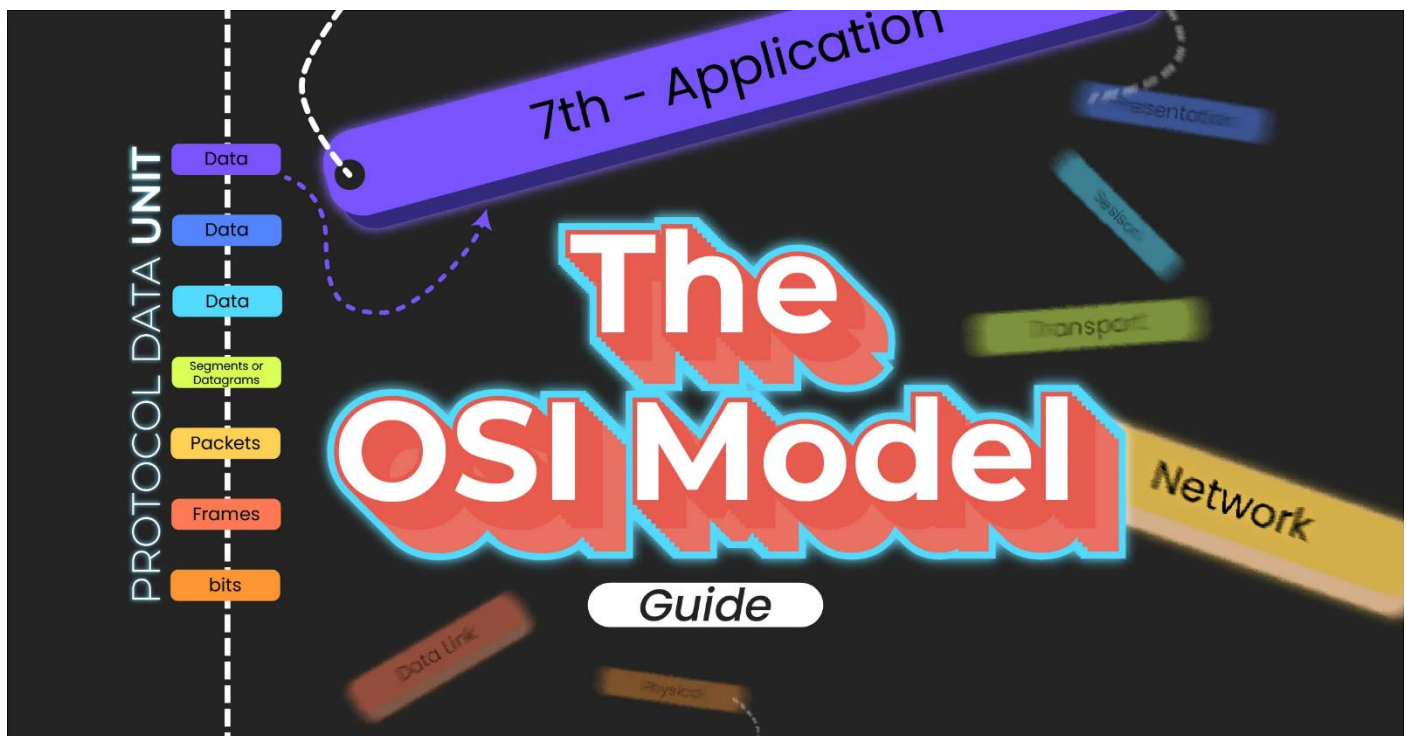# OSI Model Made Easy: A Simple Guide for Networking Newbies

Blog post summary:

➢ **A model** is a simplified representation of the real thing to help us understand complex things.

➢ **A networking model** simplifies our understanding of how networks function, and how data is transmitted from one device to another, passing through many steps behind the scenes.

➢ **The OSI model** offers a detailed view for understanding networks, though it is mainly used as a theoretical guide rather than a practical implementation.

➢ **The OSI seven-layer model summary:**

- **The Physical layer** defines the rules for moving raw bits--ones and zeroes--between devices over various physical media.

- **The Data Link layer** ensures reliable data transfer across a physical network segment by managing MAC addressing and framing, facilitating communication between devices on the same network.

- **The Network layer** manages routing and logical addressing, enabling data to be efficiently directed across interconnected networks using the most well-known protocol, Internet Protocol (IP).

- **The Transport layer** ensures reliable data delivery between endpoints by using protocols like TCP and UDP, managing data segmentation and flow control.

- **The Session layer** manages and controls communication sessions between applications, handling session establishment, maintenance, and termination.

- **The Presentation layer** translates and formats data between the Application layer and the lower layers, handling encryption, compression, and data representation for proper communication.

- **The Application layer** provides the interface for network applications, offering protocols and services that enable user interaction and data exchange over the network.