



REVOLUTIONIZING WIRELESS COMMUNICATION: AN OVERVIEW OF LI-FI TECHNOLOGY

INTRODUCTION

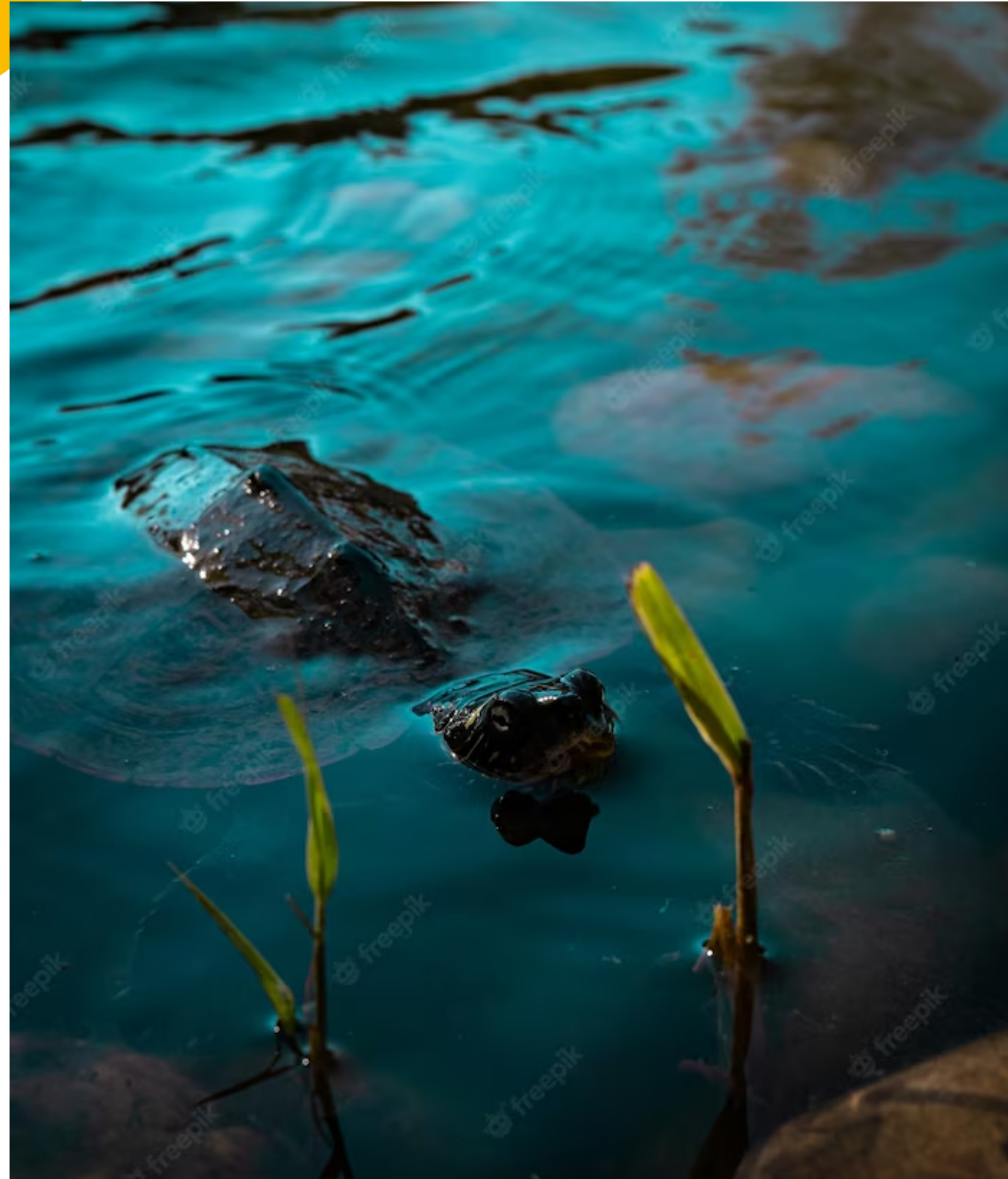
Li-Fi is a wireless communication technology that uses **light waves** instead of radio frequencies to transmit data. It is a promising alternative to traditional **Wi-Fi** and has the potential to revolutionize the way we connect to the internet.





HOW LI-FI WORKS

Li-Fi uses **LED bulbs** to transmit data through **modulation** of the light waves. The signal is received by a **photo-detector** which converts the data into an electrical signal. Li-Fi can achieve **high speeds** up to **100 Gbps** and is more **secure** than Wi-Fi as light waves cannot penetrate walls.



ADVANTAGES OF LI-FI

Li-Fi has several advantages over Wi-Fi including **higher speeds**, **lower latency**, **greater security**, and **immunity to electromagnetic interference**. It also has the potential to be used in settings where Wi-Fi is not practical such as **underwater** and **hazardous environments**.

LI-FI APPLICATIONS

Li-Fi has a wide range of potential applications including **indoor positioning, smart homes, healthcare, transportation, and aviation**. It can also be used to create **Li-Fi hotspots** that provide internet access in areas where Wi-Fi is not available.



CHALLENGES OF LI-FI

Li-Fi technology is still in its early stages and faces several challenges including **line-of-sight limitations, interference from ambient light, and high implementation costs**. These challenges must be addressed before Li-Fi can become a viable alternative to Wi-Fi.

CONCLUSION

Li-Fi technology has the potential to revolutionize the way we connect to the internet. While it faces several challenges, the advantages it offers over Wi-Fi make it a promising alternative. As research and development continue, we can expect to see Li-Fi being implemented in a wider range of applications.

THANKS