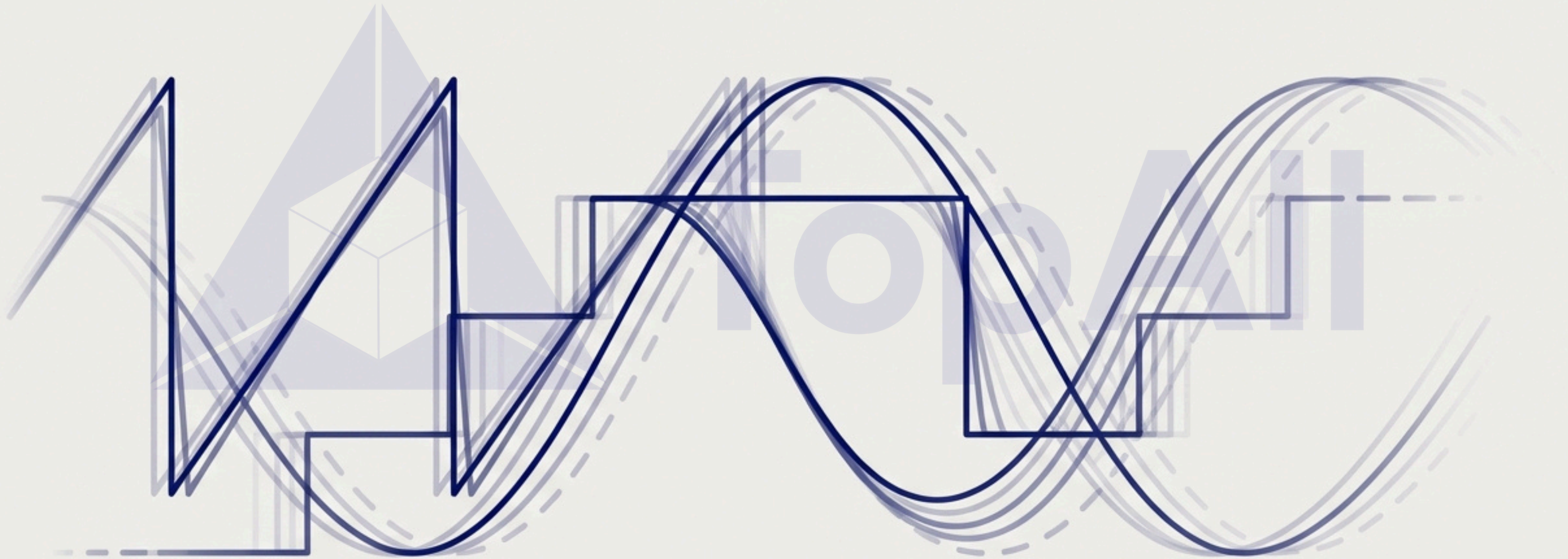


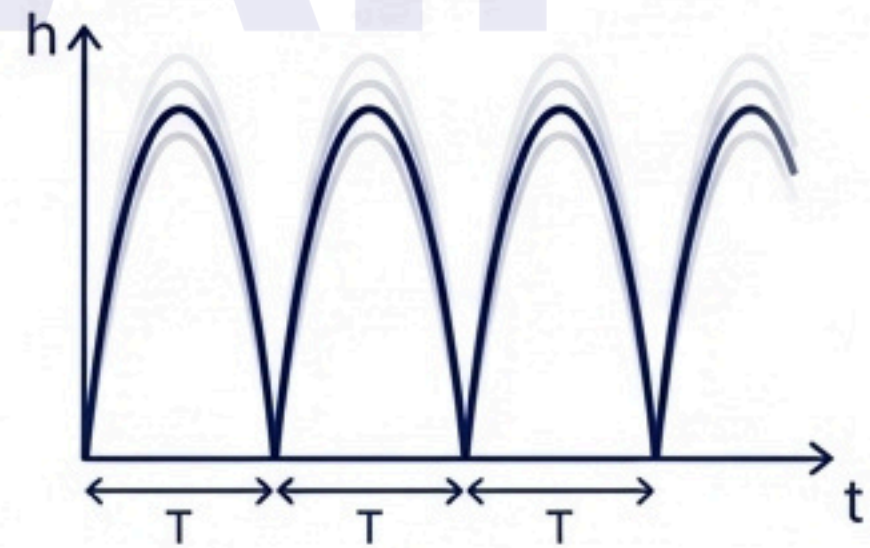
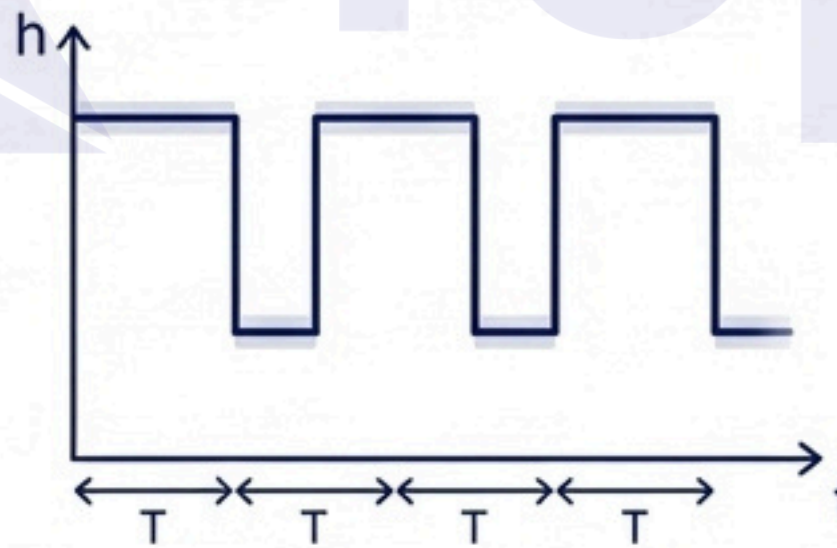
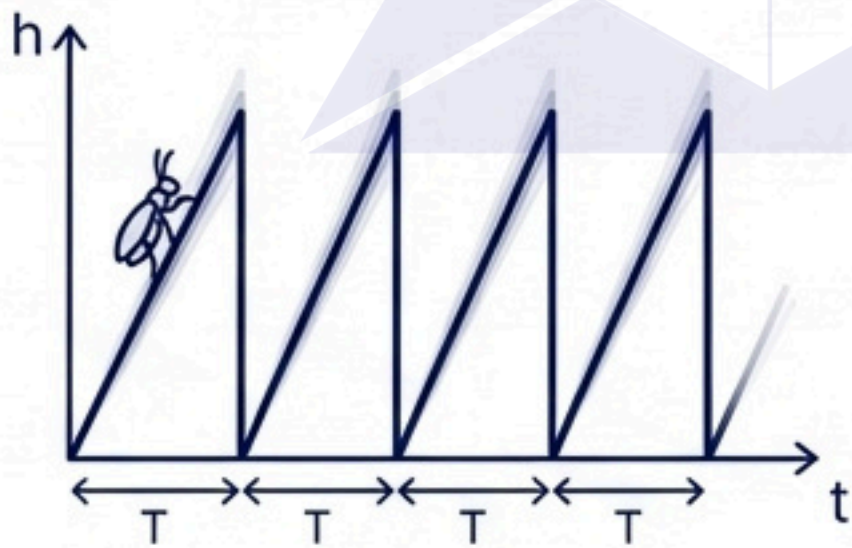
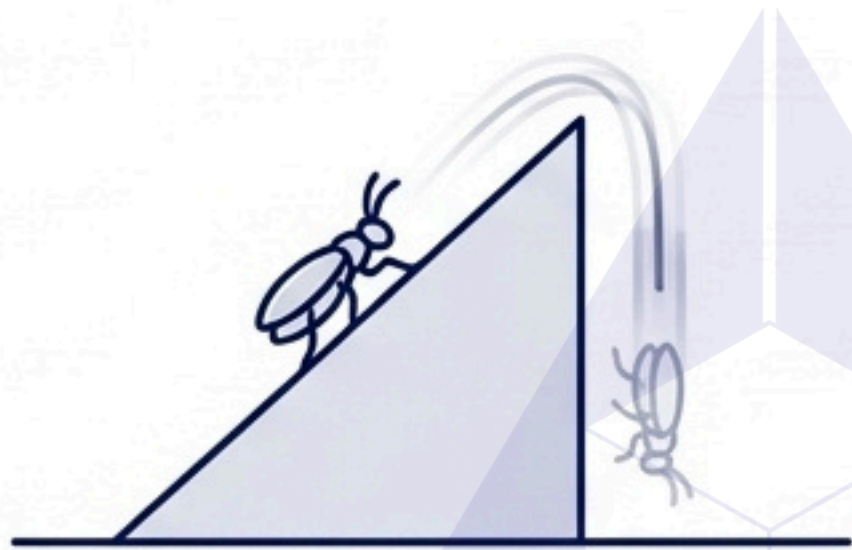
Periodic and Oscillatory Motions

They are related, but not identical.



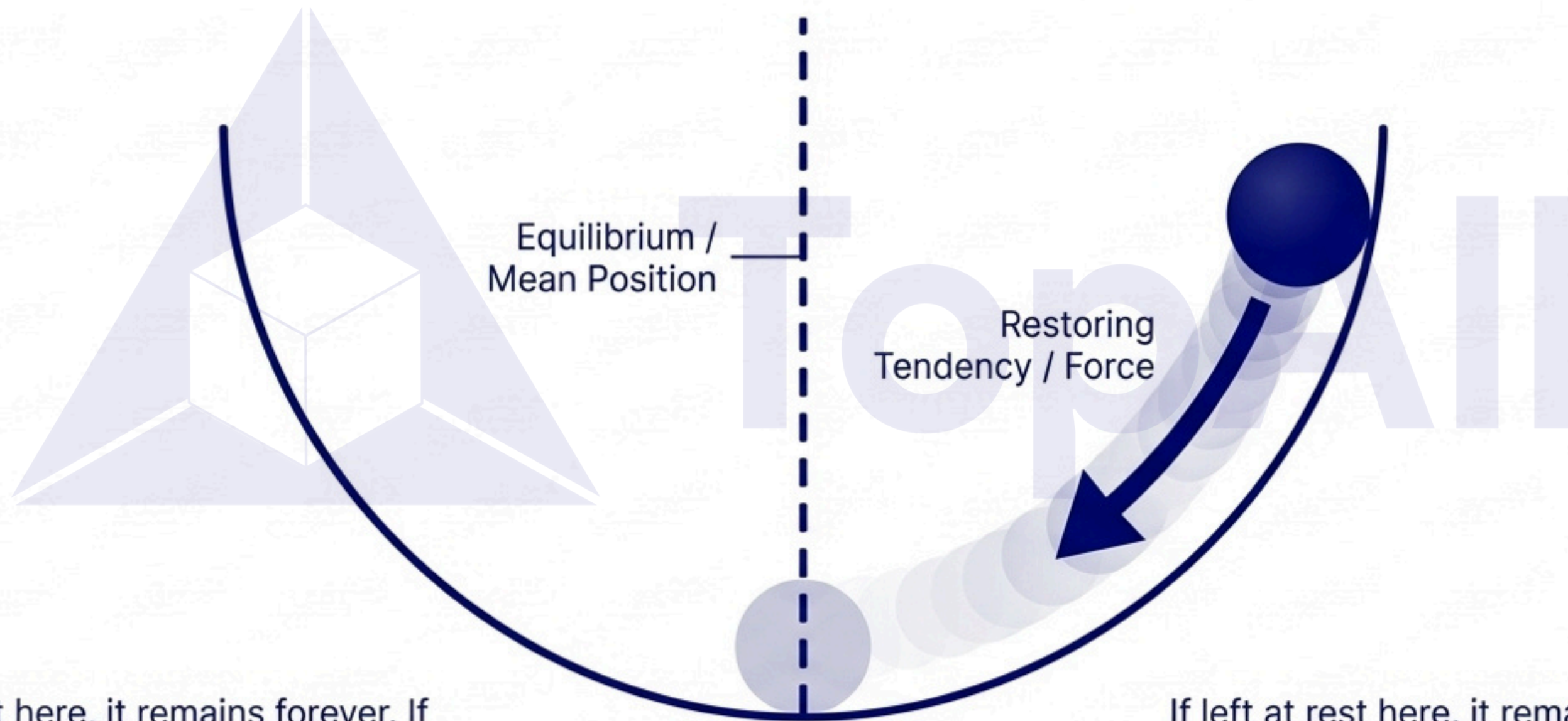
What Is Periodic Motion?

A motion that repeats itself at regular intervals of time. in 16px Inter.



What Is Oscillatory Motion?

A specialized type of periodic motion where a body moves to-and-fro about a specific mean position.

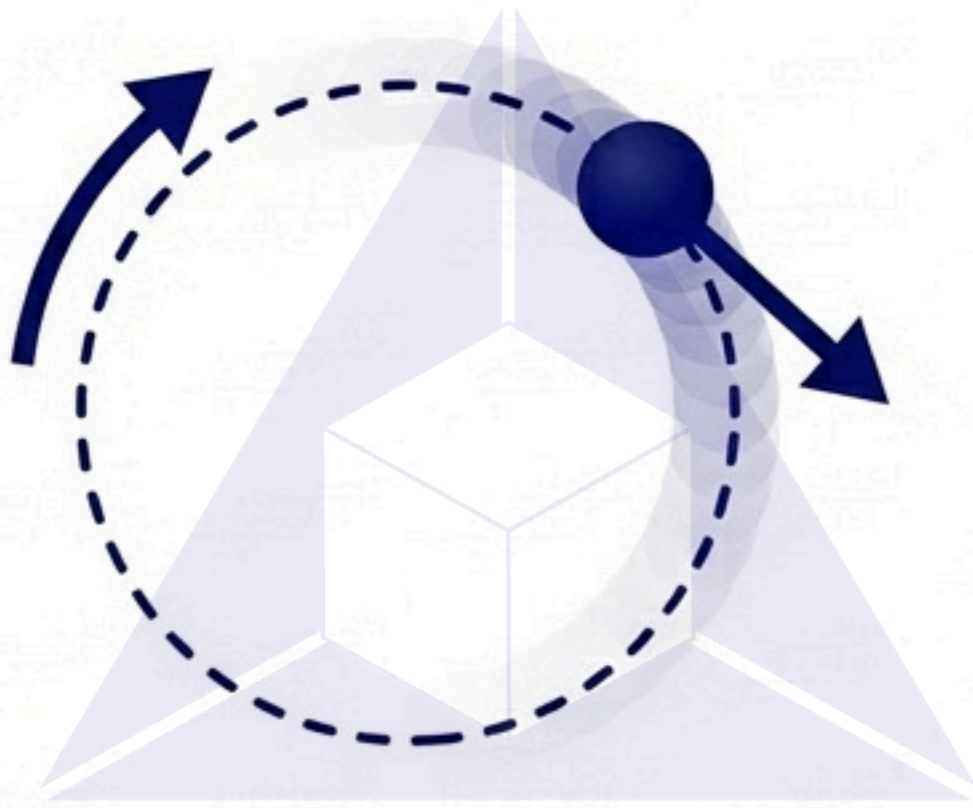


If left at rest here, it remains forever. If displaced, a force tries to bring it back.

If left at rest here, it remains forever. If displaced, a force tries to bring it back.

Periodic vs. Oscillatory

Uniform Circular Motion



Periodic

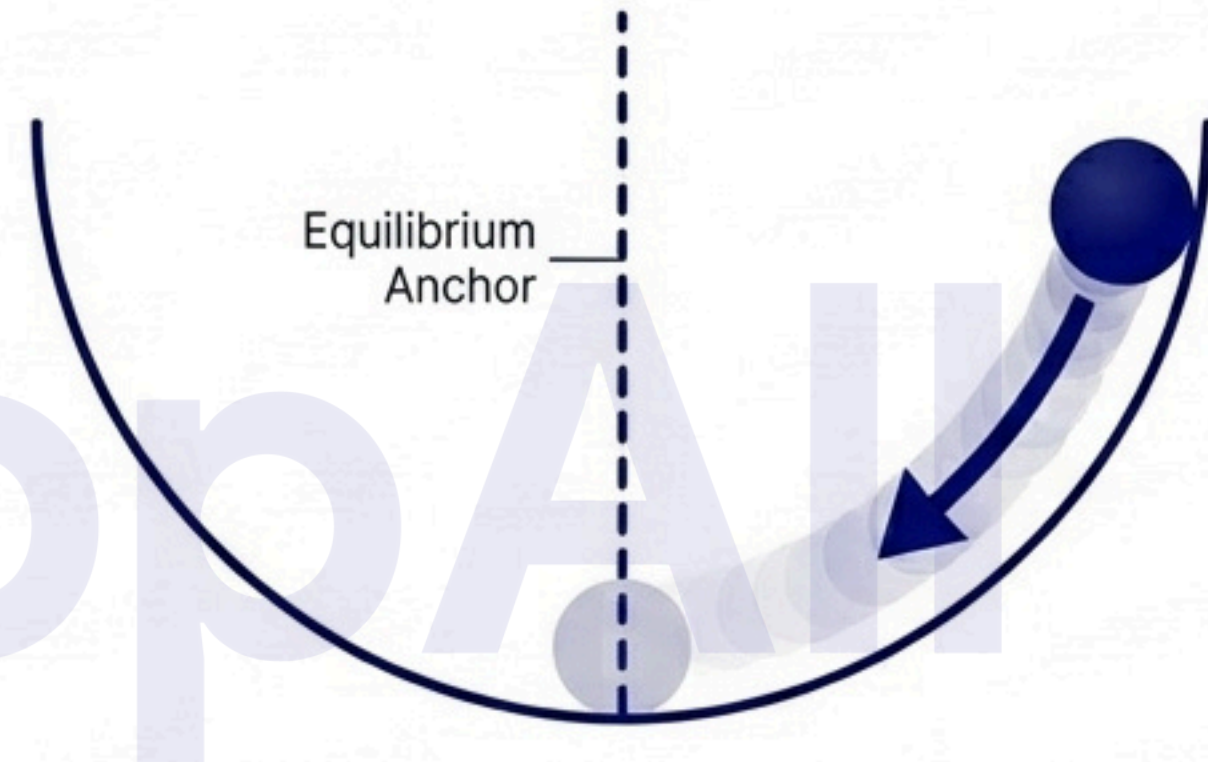
Inter (16px) (Repeats in equal time intervals)



Not Oscillatory

Inter (16px) (No equilibrium point, no to-and-fro motion)

Ball in a Bowl



Periodic

Inter (16px) (Repeats in equal time intervals)



Oscillatory

Inter (16px) (Has a restoring force toward a mean position)



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$$E=mc^2$$



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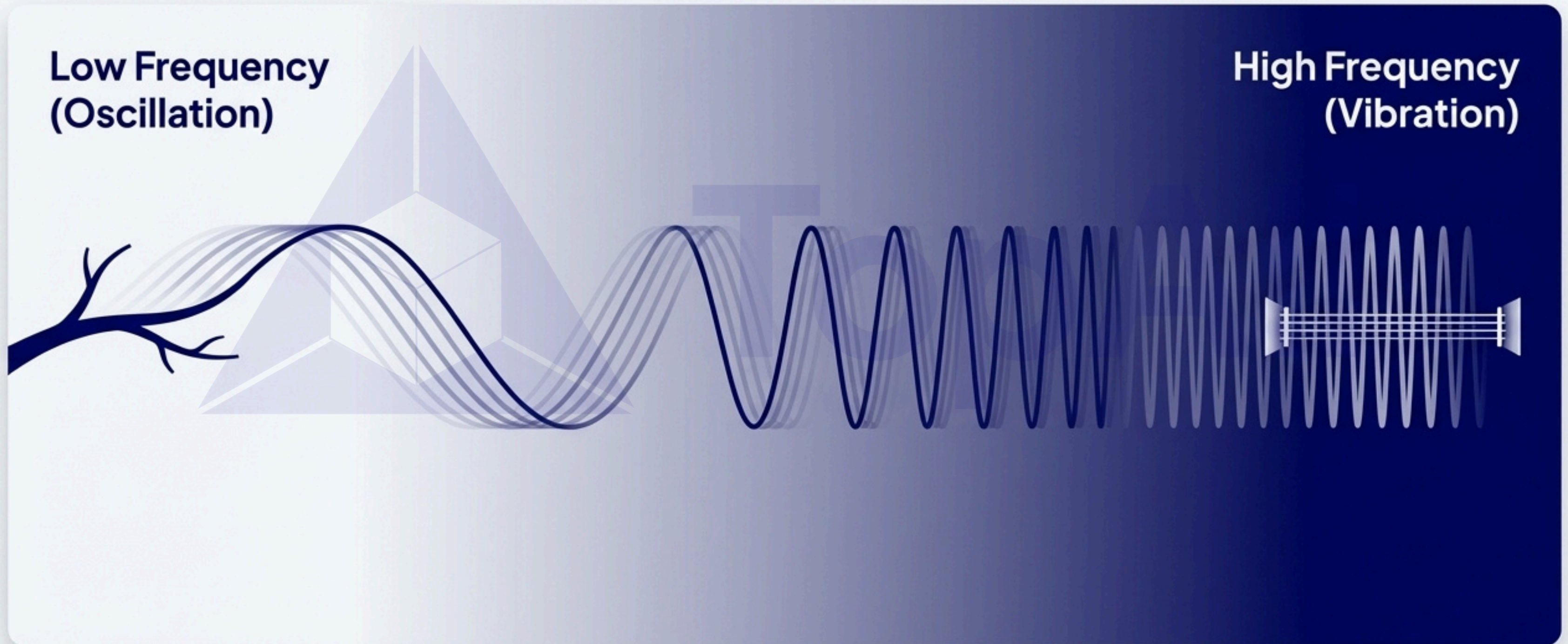
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- » Track Your Performance Smarter



Oscillations and Vibrations

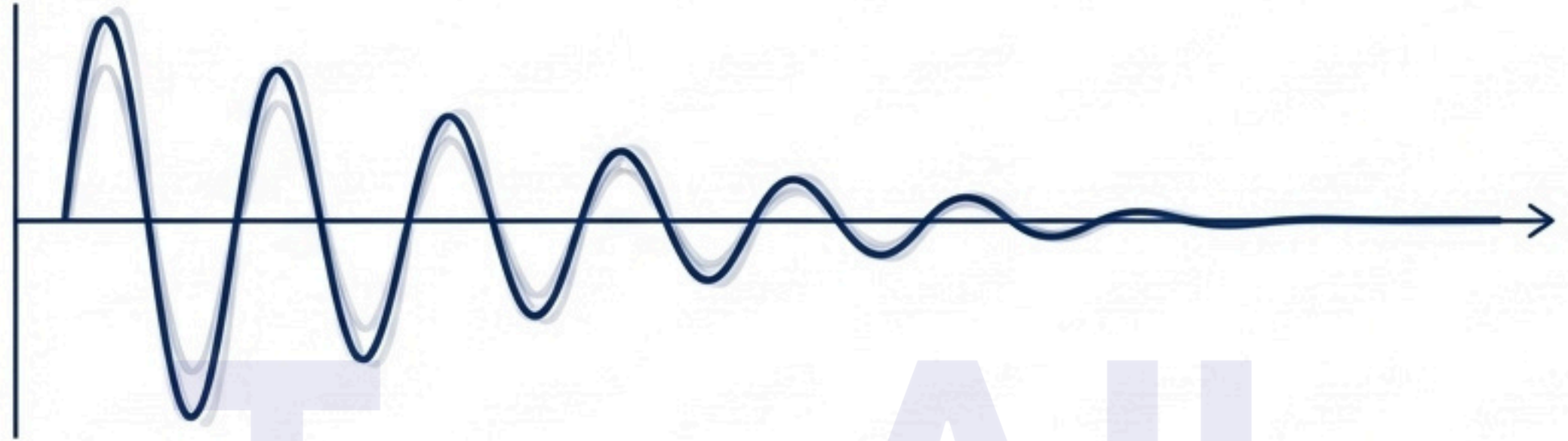
Key Insight: There is no significant physical difference between oscillations and vibrations. They only differ in frequency.



The Real World: Damped & Forced Motion

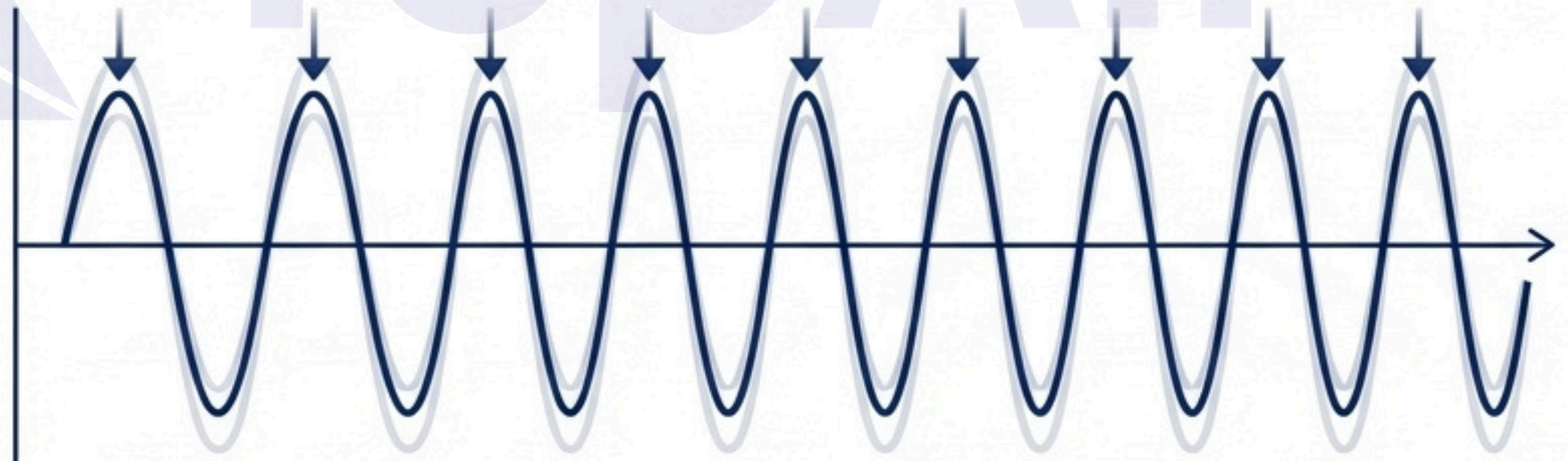
Damped Motion

Oscillations eventually die out due to friction and dissipative forces.

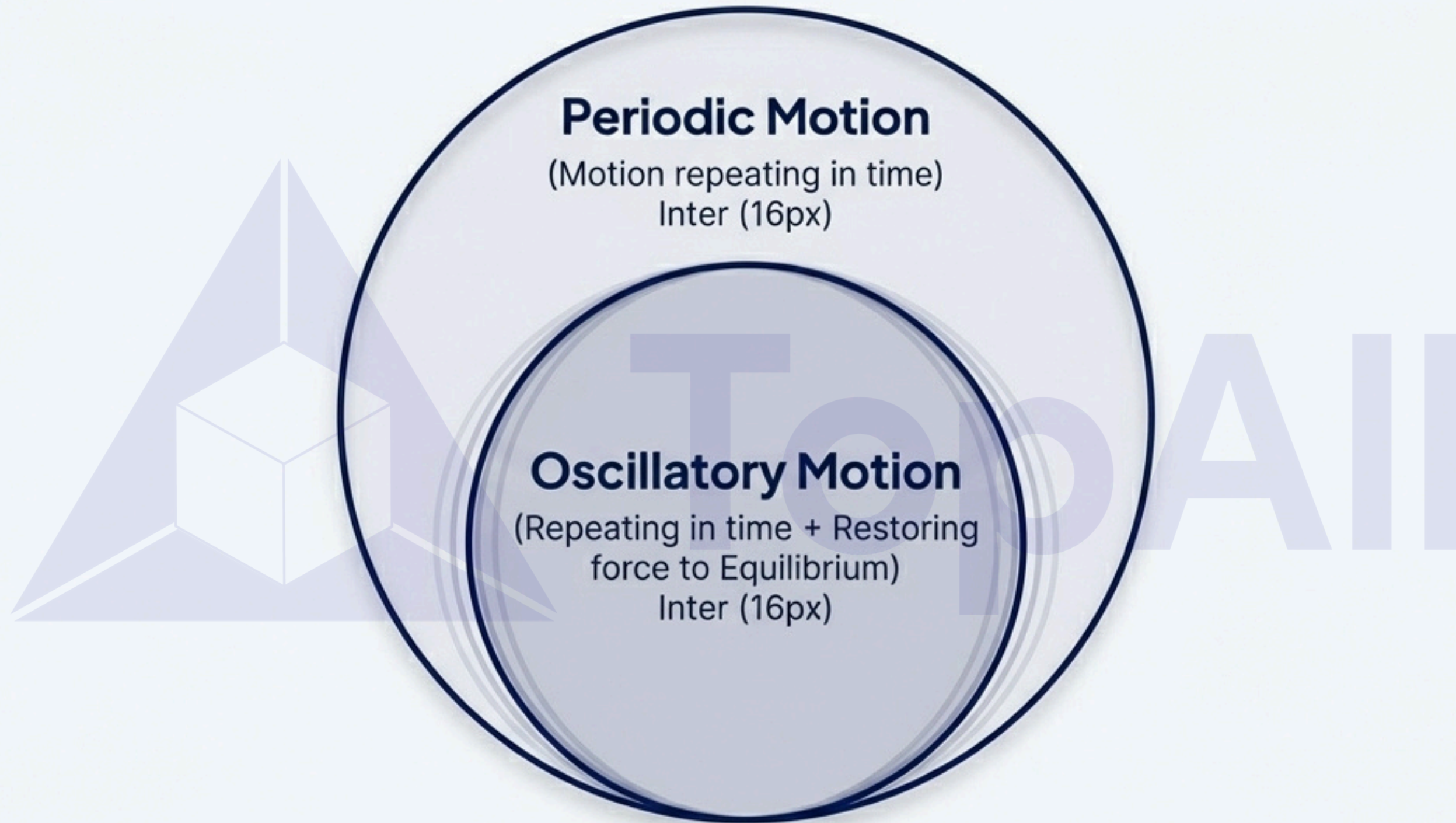


Forced Motion

Oscillations can be sustained indefinitely by an external periodic agency pushing the system.



The Golden Rule of Repeating Motion



Every oscillatory motion is periodic, but not every periodic motion is oscillatory.



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