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Website: [www.ijfmr.com](http://www.ijfmr.com) Email: editor@ijfmr.com IJFMR250664112 Volume 7, Issue 6, November-December 2025 1 Dynamic Vacuum Field Theory Satish B. Thorwe MSc, Robert Gordon University, Aberdeen UK, 12 Friarsfield Avenue, Cults, Aberdeen AB159PP Abstract This paper presents a unified theoretical model in which spacetime curvature arises from distortions in a dynamic vacuum field described by a complex scalar  $\phi = \phi(x)$  where  $\phi$  is dynamic vacuum field,  $\phi$  is vacuum amplitude and  $\theta(x)$  is vacuum phase. The vacuum possesses an intrinsic field with its phase evolves linearly with time and mass. This model is based on General Relativity, which describes gravitation as spacetime geometry, and Quantum Field Theory, which represents the vacuum as a field of particles. The model also includes a theory of dark energy and dark matter. The theory is supported by observational data and provides a unified framework for understanding the fundamental forces of nature. ISSN : 2582 – 2160 Website : [www.ijfmr.com](http://www.ijfmr.com) Email : editor@ijfmr.com IJFMR250664112 Volume 7, Issue 6, November – December 2025 spatial and temporal variations of these quantities. Within this framework, gravity is not an order or topologically constrained phase excitation. Time itself is interpreted as the rate of vacuum phase evolution. At large scales, it reproduces MOND-like behavior and the baryonic Tully-Fisher relation without dark matter. At quantum scales, it reframes the theory of quantum mechanics and provides a unified framework for understanding the fundamental forces of nature.