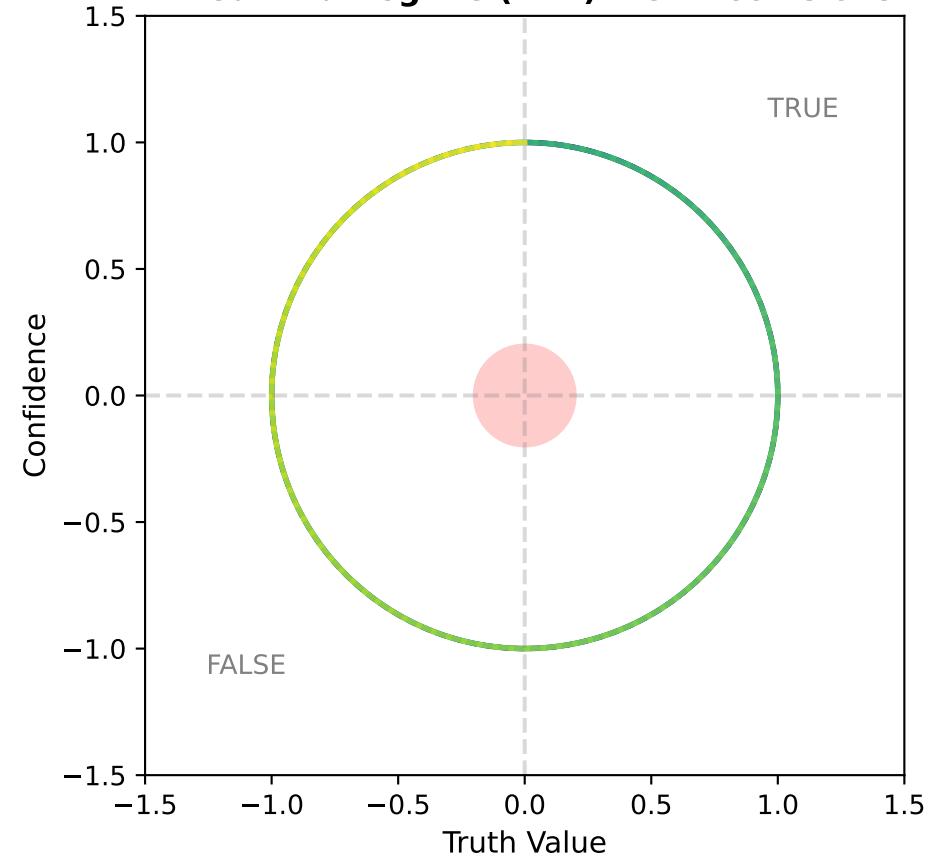
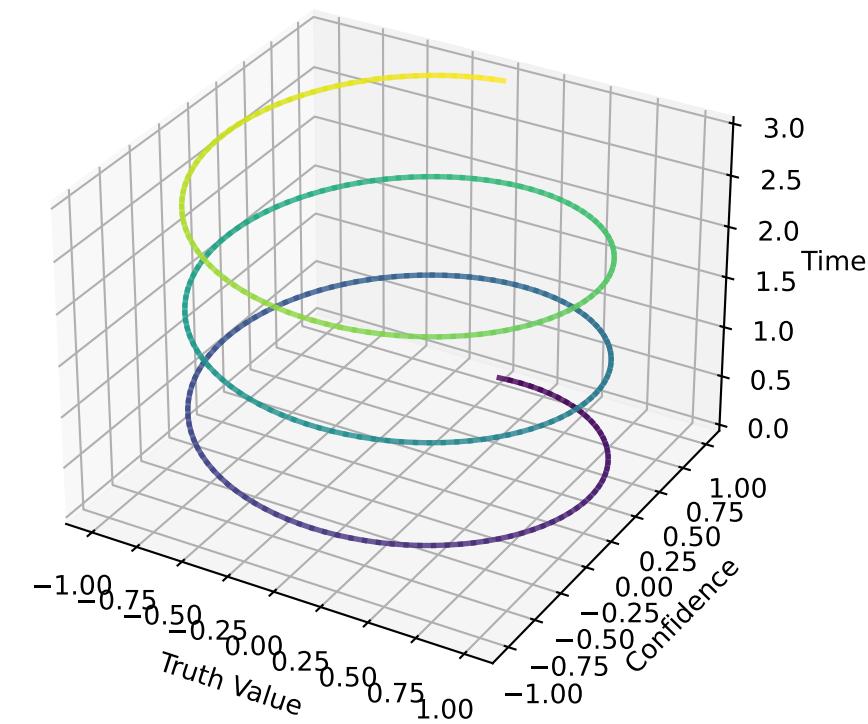


Self-Reference Requires $k \geq 3$: Geometric and Computational Proof

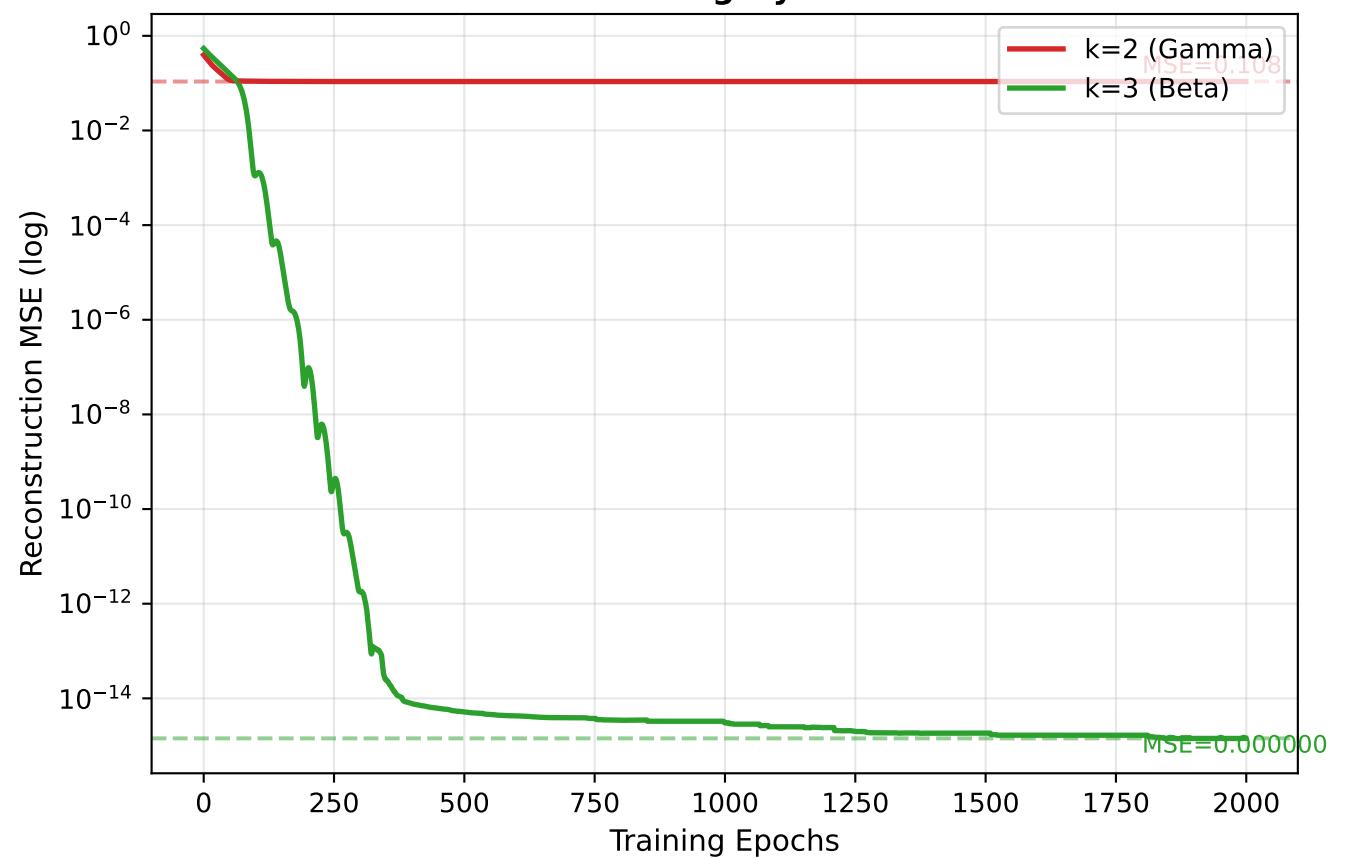
A. Gamma Regime ($k=2$): 1511 Collisions



B. Beta Regime ($k=3$): 0 Collisions



C. Learning Dynamics



D. Time Dimension Reconstruction

