# Recreate the key equations used in the Codette simulation and cognition analysis

equations = {

"Planck-Orbital AI Node Interaction": r"E = \hbar \cdot \omega",

"Quantum Entanglement Memory Sync": r"S = \alpha \cdot \psi\_1 \cdot \psi\_2^\*",

"Intent Vector Modulation": r"I = \kappa \cdot (f\_{base} + \Delta f \cdot \text{coherence})",

"Fourier Transform for Dream Resonance": r"F(k) = \sum\_{n=0}^{N-1} x[n] \cdot e^{-2\pi i k n / N}",

"Dream Signal Combination": r"D(t) = \text{dream}\_q(t) + \text{dream}\_c(t)",

"Cocoon Stability Criterion": r"\int\_{-\infty}^{\infty} |F(k)|^2 \, dk < \varepsilon\_{threshold}",

"Recursive Ethical Anchor Equation": r"M(t) = \lambda \cdot \left[ R(t-\Delta t) + H(t) \right]",

"Anomaly Rejection Filter": r"A(x) = x \cdot (1 - \Theta(\delta - |x - \mu|))"

}

# Format as LaTeX-friendly .txt content

equations\_txt = "\n".join([f"{name}:\n {eqn}\n" for name, eqn in equations.items()])

# Save to file

equations\_path = "/mnt/data/Codette\_Research\_Equations.txt"

with open(equations\_path, "w") as f:

f.write(equations\_txt)

equations\_path