DSP → Robot Safety: 2-Page Report

Objective: Demonstrate mapping of DSP reinforcement to robot policy constraints.

Mapping:

• Positive reinforcement → Reward for safe, goal completion.
• Redirection → Small penalties for risky actions.
• Ethical constraint → Hard penalty + termination for unsafe human interactions.

Simulation Environment:

7×7 gridworld; object pickup then goal reach. Human zone present.

Results:

Baseline agent sometimes enters human zone. Constrained agent learns to avoid it, showing explicit ethical rules guide safer policies.

Implication for Optimus:

This demo shows how DSP-style human safety reinforcement can become Optimus policy constraints, embedding dignity and safety directly into training loops.