

Deadlock Detection & Analysis Report

Generated: November 12, 2025 at 11:46 PM

Automated Deadlock Detection System
Version 1.0
Advanced Analysis Report

Executive Summary

■ DEADLOCK DETECTED

Metric	Value
Total Processes	5
Total Resources	5
Active Allocations	5
Pending Requests	5
Detected Cycles	1
Detection Time	0ms
ML Risk Score	100.0%

System Overview

Processes

PID	Name
0	Philosopher_0
1	Philosopher_1
2	Philosopher_2
3	Philosopher_3
4	Philosopher_4

Resources

Resource ID	Total Instances
F0	1
F1	1
F2	1
F3	1
F4	1

Deadlock Detection Results

Deadlock Detected!

Found 1 circular wait cycle(s) in the system.

Detection Time: 0ms

Detected Cycles:

- Cycle 1: 0 → 1 → 2 → 3 → 4 → 0

Machine Learning Prediction

Deadlock Probability: 100.0%

Risk Level: CRITICAL

Recommendations

- Immediate action required: Apply recovery strategy
- Consider process termination or resource preemption
- Review resource allocation policies
- Implement deadlock prevention strategies:
 - Lock ordering
 - Timeout mechanisms
 - Resource quotas