

# DevOps Deployment Rollback Recommendation Agent Team 11

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# Problem Statement

## The Challenge

DevOps teams struggle to decide when to rollback deployments after release

- Critical decisions require rapid response
- Manual analysis causes delays
- Service disruptions impact users
- Inconsistent decision-making across teams

## The Impact

Without data-driven guidance

- Extended downtime periods
- Revenue and reputation loss
- Increased stress on teams
- Missed early warning signals



# Our Solution Approach



## AI-Powered Analysis

Smart monitoring of deployment metrics and error patterns



## Real-Time Assessment

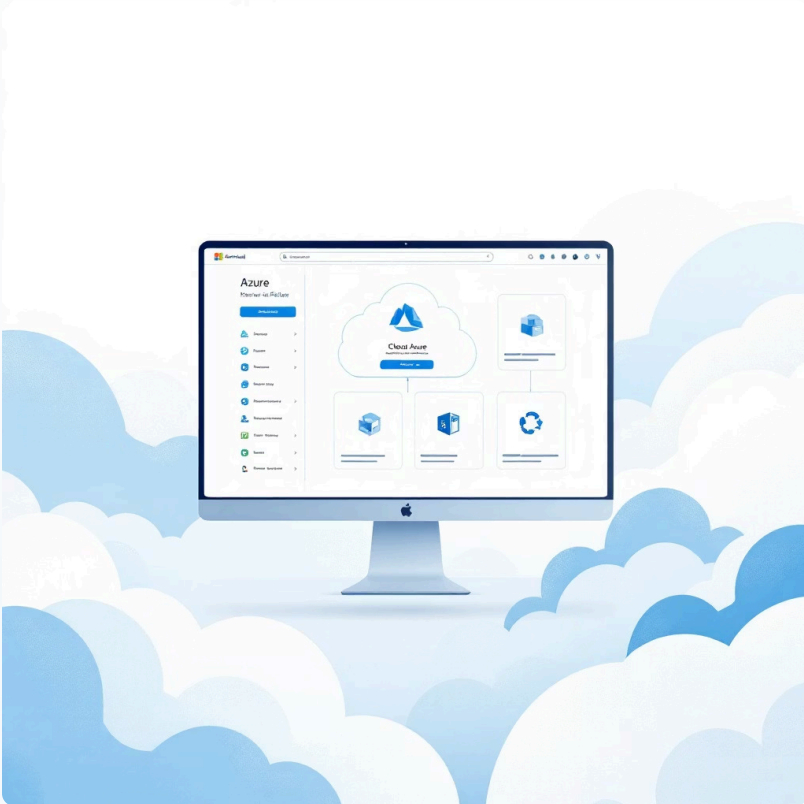
Instant severity scoring and impact evaluation



## Actionable Recommendations

Clear rollback advisories with confidence levels

# Why Azure OpenAI GPT-4o?



01

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## Enterprise Security

Built-in compliance and data protection for production environments

02

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## High Performance

Fast response times critical for incident management

03

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## Reliability

Uptime SLA ensures availability during critical moments

04

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## Integration Ready

Seamless connection with Azure DevOps and monitoring tools



# System Architecture



## Data Ingestion

Deployment logs, metrics, error reports, user feedback



## AI Processing

GPT-4o analyzes patterns and correlations



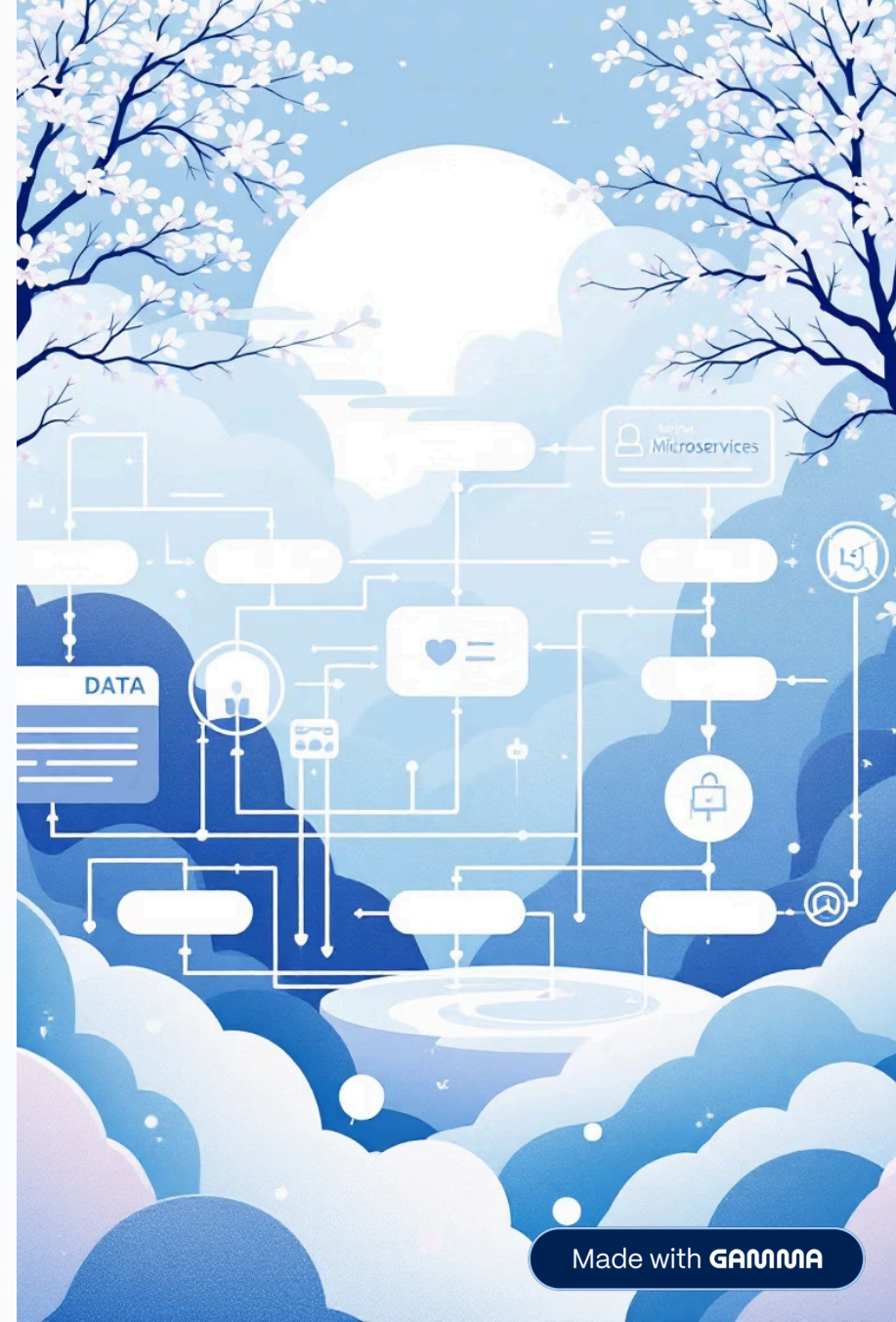
## Decision Engine

Generates recommendations with confidence scores



## Alert Delivery

Dashboard, alerts, PDF/JSON exports





# Data Requirements

## Deployment Data

- Deployment logs and timestamps
- Configuration change details
- Version control information
- Rollback procedures documentation

## Performance Metrics

- Response times and latency
- CPU and memory utilization
- Error rates and exception types
- API success/failure rates

# Output & Delivery



## Rollback Advisories Include:



### Severity Assessment

Critical, High, Medium, Low classifications



### Affected Components

Specific services and dependencies impacted



### Recommended Actions

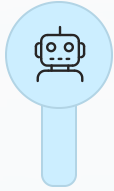
Step-by-step rollback procedures



### Confidence Score

AI certainty level for each recommendation

# Future Scope



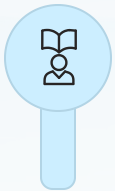
## Automated Rollback Execution

AI triggers rollbacks automatically for critical issues



## Multi-Cloud Support

Expand beyond Azure to AWS, GCP platforms



## Continuous Learning

Model improves from each deployment outcome



## Team Collaboration

Integrated communication and decision tracking



# Thank You!

