

DevOps Deployment Rollback Recommendation Agent

Team 11

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Problem Statement

The Challenge

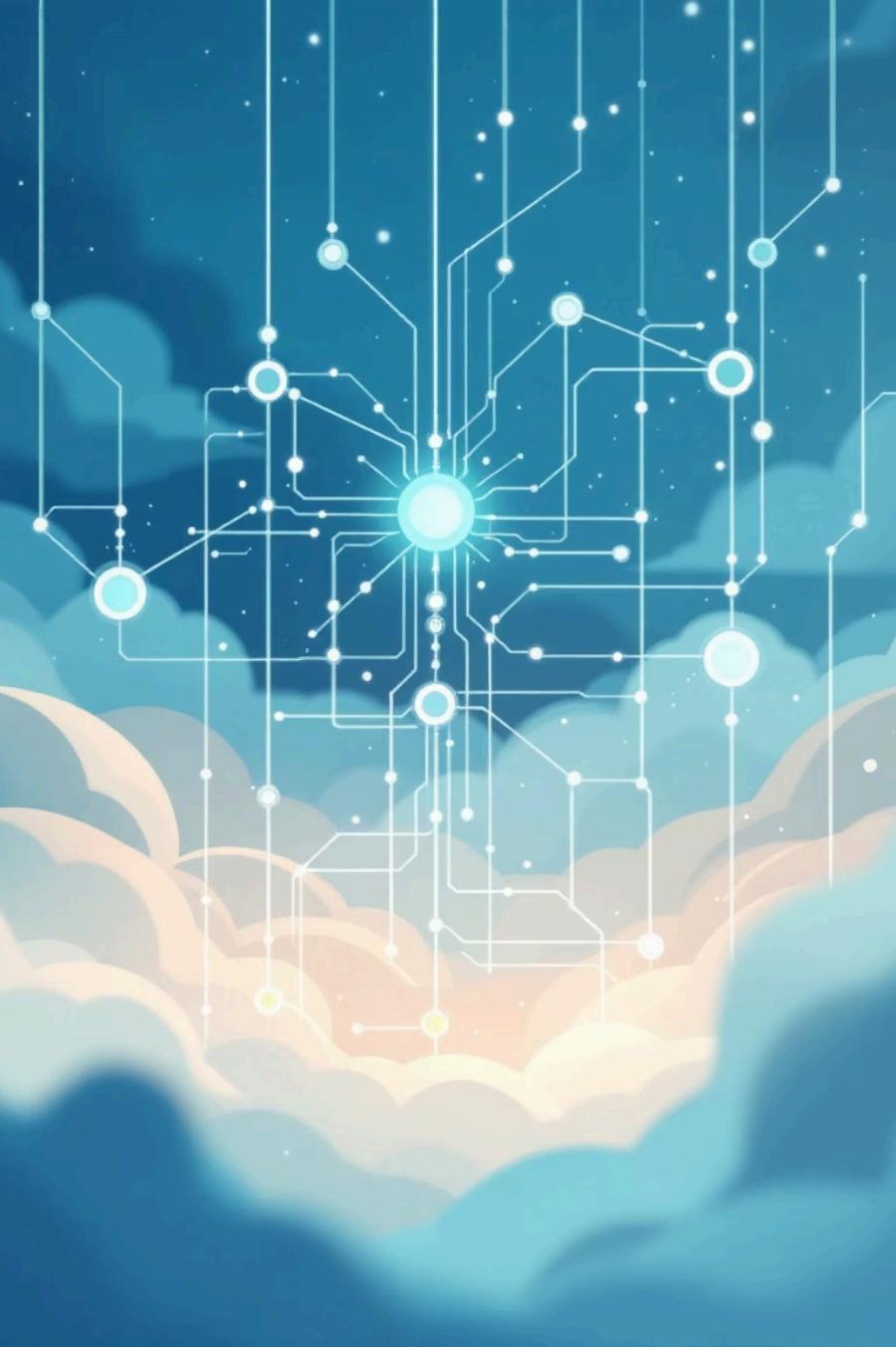
DevOps teams struggle to decide when to rollback deployments after release

- 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

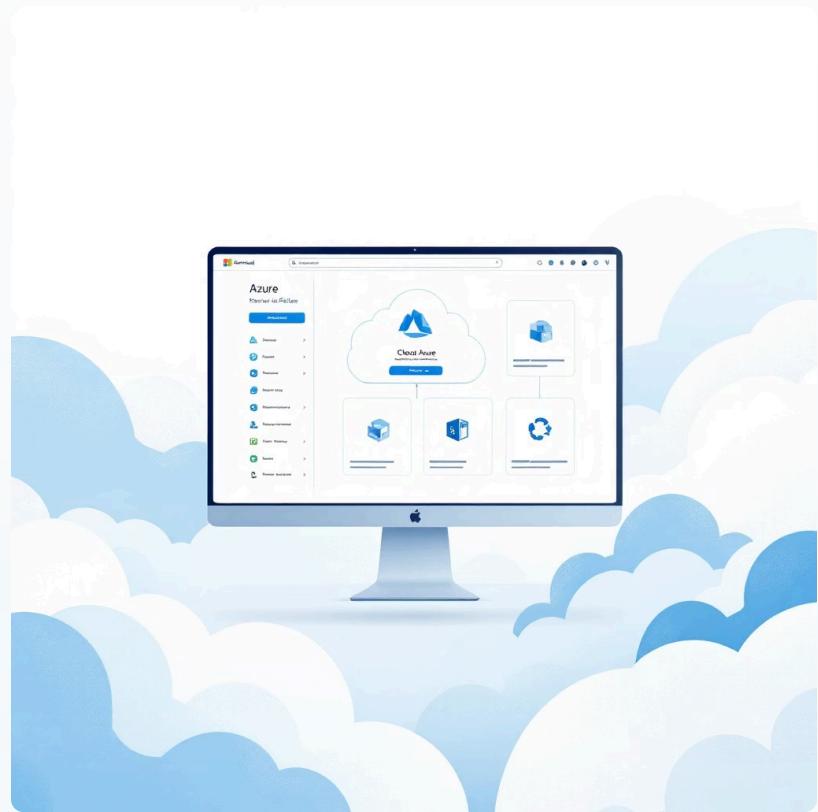
Instant severity scoring and impact evaluation



Actionable Recommendations

Clear rollback advisories with confidence levels

Why Azure OpenAI GPT-4o?



01

Enterprise Security

Built-in compliance and data protection for production environments

02

High Performance

Fast response times critical for incident management

03

Reliability

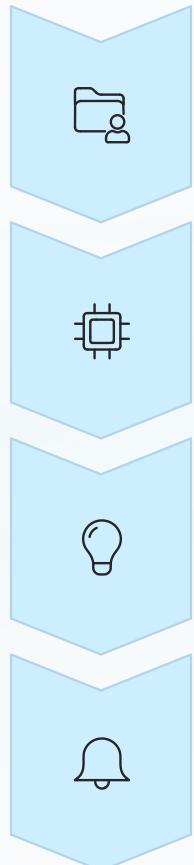
Uptime SLA ensures availability during critical moments

04

Integration Ready

Seamless connection with Azure DevOps and monitoring tools

System Architecture



Data Ingestion

Deployment logs, metrics, error reports, user feedback

AI Processing

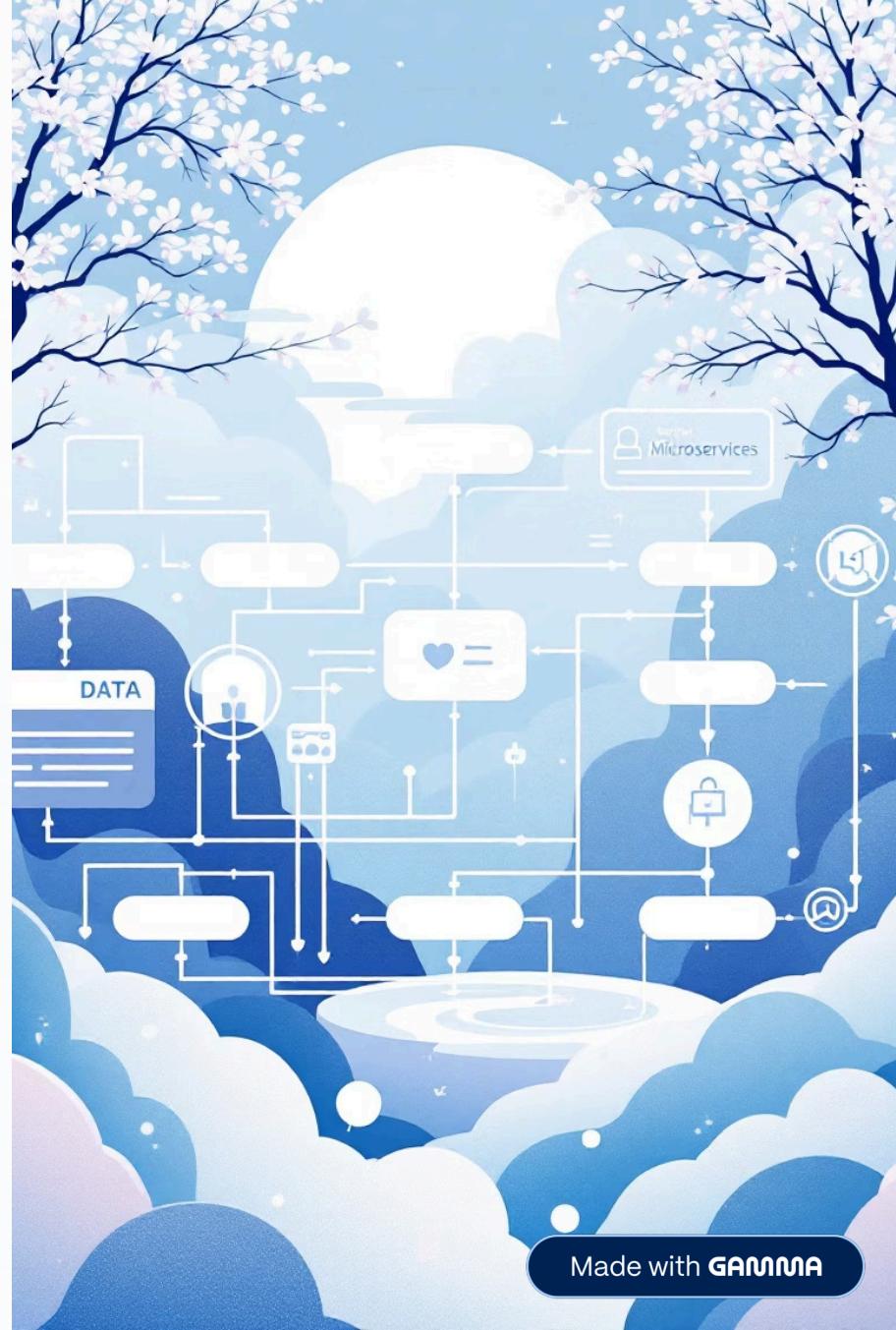
GPT-4o analyzes patterns and correlations

Decision Engine

Generates recommendations with confidence scores

Alert Delivery

Dashboard, alerts, PDF/JSON exports





Data Requirements

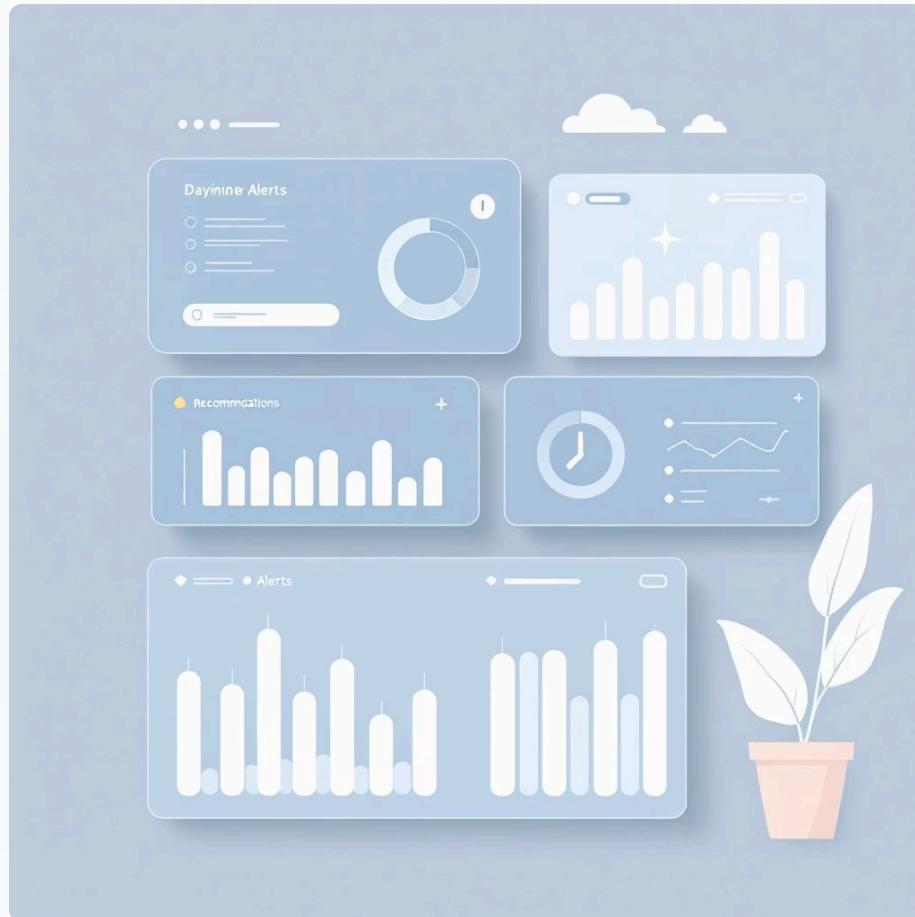
Deployment Data

- 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

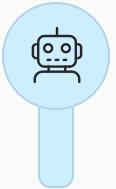
Step-by-step rollback procedures



Confidence Score

AI certainty level for each recommendation

Future Scope



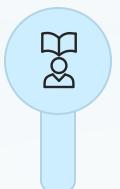
Automated Rollback Execution

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!

