

Generative AI Code Modernisation for UK Public Sector Legacy Systems

AI-powered legacy code refactoring and modernisation for UK government systems

Secure, compliant migration of critical public sector applications to modern cloud-native architectures

Lower legacy maintenance costs

Reduces the cost of running and maintaining legacy systems through automated, intelligent refactoring

Faster digital transformation

Accelerates modernisation timelines with rapid, automated code migration and structured, phased

Improved performance and scalability

Modern architecture patterns and cloud-native designs enhance system responsiveness and scale to

Transform Public Services

- Purpose-built for UK public sector legacy systems with UK/EEA data residency and data sovereignty controls
- Combines generative AI with proven engineering practices to reduce technical debt and future-proof core
- Minimises operational disruption through phased migration, rollback options, and integration with existing
- Strengthens security through continuous scanning, encryption in transit and at rest, and regular penetration

Service Overview

This service uses AI-powered analysis and automated refactoring to transform legacy public sector systems into modern, maintainable, and cloud-ready applications while preserving existing functionality and data integrity. It reduces technical debt, enhances security, and supports compliant, low-disruption modernisation for UK government organisations.

Core Capabilities

- Automated legacy code analysis, refactoring, and migration across multiple languages (for example COBOL, Java, Python)
- Cloud-native architecture transformation, including containerisation and microservices patterns for public, private, community, and hybrid cloud environments
- Integrated security scanning, vulnerability remediation, and compliance alignment with UK government and GDPR requirements

Key Features

AI-powered legacy code analysis

Automated refactoring workflows with intelligent code analysis

Multi-language modernisation support

Includes COBOL, Java, and Python codebases

Automated technical debt assessment

Prioritised refactoring recommendations for targeted improvement

Cloud-native migration

Includes containerisation and microservices-based redesign

Comprehensive security scanning

Vulnerability remediation during migration process

Intelligent code documentation generation

Supports knowledge transfer and long-term maintainability

Real-time progress tracking

Detailed migration reporting dashboards for visibility

Integration with CI/CD pipelines

Seamless integration with existing development toolchains

Service Benefits

Lower legacy maintenance costs

Reduces the cost of running and maintaining legacy systems through automated, intelligent refactoring and optimisation

Faster digital transformation

Accelerates modernisation timelines with rapid, automated code migration and structured, phased delivery

Improved performance and scalability

Modern architecture patterns and cloud-native designs enhance system responsiveness and scale to varying public sector workloads

Stronger security and compliance

Automated vulnerability identification, remediation, and UK-based data processing support improved security posture and GDPR compliance

Protected institutional knowledge

Rich generated documentation and training preserve critical system knowledge across teams and suppliers

Summary & Key Advantages

Why Choose This Service

- Purpose-built for UK public sector legacy systems with UK/EEA data residency and data sovereignty controls
- Combines generative AI with proven engineering practices to reduce technical debt and future-proof core services
- Minimises operational disruption through phased migration, rollback options, and integration with existing CI/CD and environments
- Strengthens security through continuous scanning, encryption in transit and at rest, and regular penetration testing by NCSC-approved providers
- Offers flexible multi-cloud deployment (public, private, community, hybrid) with configurable support tiers up to dedicated enterprise support

DATASUMI

Email: sales@datasumi.com

Web: www.datasumi.com