

HOW AI WILL CHANGE THE SOFTWARE DEVELOPMENT LIFE CYCLE^(AI)

[expleo]

1 Planning and requirement analysis

Large Language Models (LLMs) can assist business analysts or product owners in reviewing requirement documents to identify ambiguities and inconsistencies. At the same time, predictive analytics can identify potential risks in scope definition based on historical project data.

Reduced risk of costly rework, improved business alignment and stronger compliance assurance from the start.

2 Design and architecture

AI can assist software architects and software engineers in automating legacy code analysis to map dependencies, suggest a refactoring approach for transitioning from monolithic systems to a microservices architecture, and simulate architecture to evaluate scalability, performance, and security trade-offs before coding.

Reduce the cost and delay of legacy IT systems and reduce the risk of costly rework after the deployment phase.

3 Coding and implementation

Developers are shifting from hand-coding to vibe coding (co-creation), where tools like GitHub Copilot and Cursor generate entire software components (from architecture and logic to interfaces and documentation) from natural language prompts. However, agentic coding (AI autonomy) is expected to become mainstream shortly.

Increase the development team productivity while accelerating time-to-market.

5 Deployment and production

AI can help DevOps engineers automate the generation of Infrastructure-as-Code (IaC) templates for multi-cloud or hybrid environments and ensure continuous monitoring with anomaly detection.

Reduce the cost and delay of the deployment, enhance the system reliability.

4 Testing and quality assurance

AI can help quality analysts generate functional test cases and assist quality engineers in automating Application Programming Interface (API), User Interface (UI), and performance testing using self-learning scripts that adapt to application changes.

Expand test coverage at lower cost, improve releases reliability to increase stakeholders trust.

