DELL Technologies

Solution Brief

Enterprise-Ready Generative AI Code Generation

Drive developer productivity with Generative AI code generation

Developers have been quick to adopt Generative AI; however, they're doing this outside the purview of IT. While AI-assisted code generation is useful, it is often done without oversight, security, compliance, or consistency, falling into the category of "shadow AI," which increases risk. Standardizing Generative AI for coding across the organization presents an opportunity to increase developer productivity, reduce human error, accelerate development efforts, and upskill your workers safely.

Transform natural language into effective code

Using natural language inputs, AI-assisted code generation improves accessibility, lowering the barrier to entry for new programmers and reducing the time spent on low-value activities for senior developers. Additionally, organizations can ensure that coding is based on known standards and best practices, enabling organizations to better meet business objectives and security and compliance requirements. This also leads to more efficient prototyping, rapid iteration, and better collaboration while taking into consideration intellectual property and copyright risks.

Intelligent code generation use cases

Natural language programing

Transform natural language into executable code with Generative AI, making coding more accessible and accelerating development efforts.

Unit testing

Automate and scale testing by generating diverse use cases that speed up testing and help detect bugs and address more scenarios.

Code documentation

Leverage Generative AI to analyze code and automatically generate technical documentation, including comments, API guides, and knowledge bases.

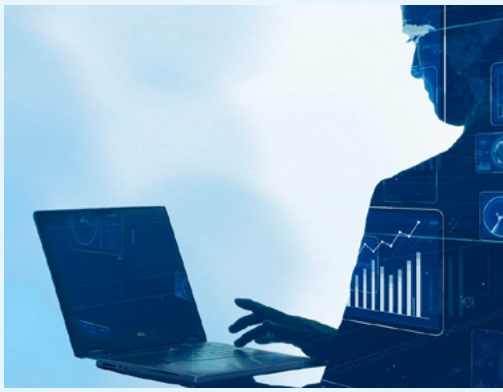
Code modernization

Automatically translate and update programming languages, modernizing software while preserving its original functionality.

How it works

Organizations can drive enhanced and consistent AI-assisted code creation by building strong guardrails and developing best practices for AI. This ensures standardization, enhances security, and improves developer productivity. To do this, organizations should:

- Identify and collect ideal code examples and preferred processes, implementing them into code-writing models.
- Train developers on prompt engineering, helping them incorporate AI tooling into their workflows.
- Review the output of the model and correct/edit the results to enable the correct functionality.
- Monitor and iterate, incorporating developer feedback into the model.



Why your data is critical

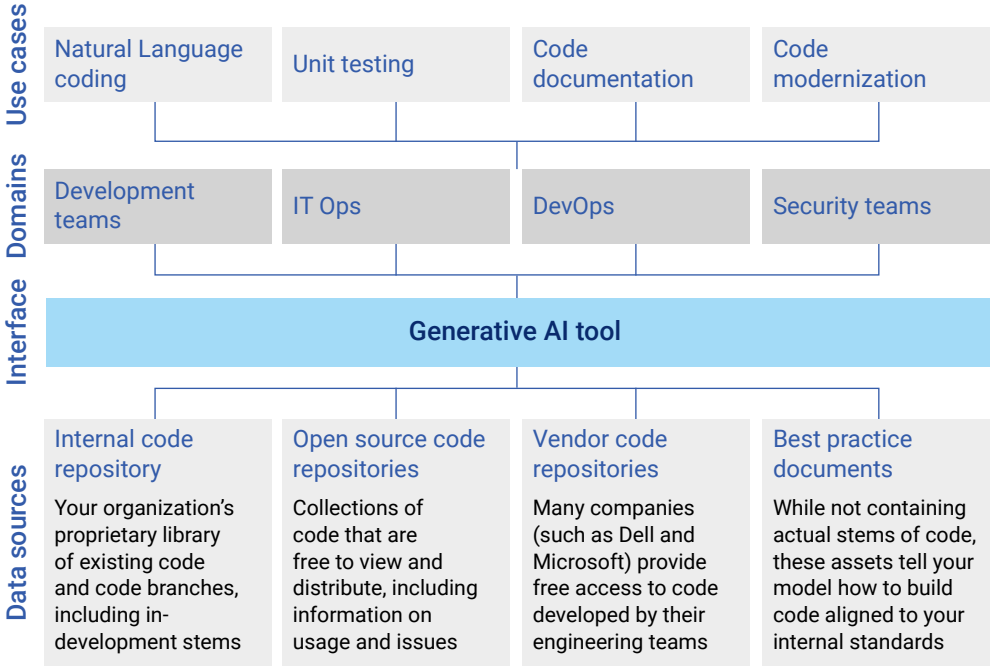
AI-assisted code generation is greatly enhanced by the quality, relevance, and depth of available data, code samples, and repositories. Whether coding, writing documentation, or unit testing, quality data provides deep context for more accurate and reliable results.

Continuous improvement with new data, feedback, guardrails, and processes is critical to keep pace with innovations in programming languages and development methodologies. This ensures that the solution remains relevant, compliant, and effective, generating code that incorporates modern practices, standards, and technologies.

AI Code generation on-premises

Tailoring AI-assisted coding solutions to specific on-premises environments can boost organizational efficiency and productivity. By integrating seamlessly with existing systems, custom tools enhance control, security, and compliance to meet enterprise standards. Additionally, they provide the scalability and flexibility needed to innovate and maintain a competitive edge.

Code generation data sources and use cases



About Dell Generative AI

Dell Technologies offers the world's broadest Generative AI solutions portfolio, from client devices to data center to cloud, all in one place.

You can accelerate your AI journey with Dell Technologies Services and a broad partner ecosystem that includes support for many open source Generative AI models. Regardless of whether a team member is working with purpose-built Dell infrastructure to power organization-wide Generative AI applications, or simply prompting AI from a Dell laptop, they are working with the industry's broadest and most advanced portfolio of AI-enabled solutions.

Our approach is to bring AI to your data. This means meeting strict data sovereignty and compliance requirements while right-sizing AI infrastructure to reduce costs, support sustainability objectives, and keep you in control of the model and your data.

Next steps

Get started with a fee-waived Accelerator Workshop for Generative AI, which can help you gain consensus among your business and technical stakeholders on your solution and prioritized use cases.

Learn more

Accelerator Workshop for Generative AI

Learn more about Dell solutions for Generative AI.

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