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The Mindful IT Company
Born Digital . Born Agile

Case Study

Improve Development & Unit Testing Productivity

Client Overview

Our client, an established name in the media sector, focuses on audience engagement and revenue management solutions. The company aims to enhance internal digital campaign performance and customer targeting efficiency by providing advanced digital marketing automation platforms.

Business Challenge

The client was keen on adding new features to their product in the shortest time possible based on their client feedback. Conventional methods for project execution were posing some serious challenges due to the short time available for product release, complex features to be developed, and the necessity for 80% code coverage. Some of the challenges were:

- Dealing with a highly complex codebase.
- Maintaining high software quality despite time constraints.
- Providing development cycles that are simultaneous and fast.

Solution Delivered

We evaluated Cursor AI, which is an AI-powered coding assistant built on Visual Studio Code, offering intelligent code generation, autocompletion, and refactoring capabilities. A pilot was conducted to assess the feasibility of the project. It gave out good results by generating accurate code based on the prompt given, and also helped in fixing errors and issues in existing code.

The tool was then incorporated into the project to address the above-mentioned business challenges. The tool was utilized for the following tasks:

Enable intelligent debugging and code comprehension.

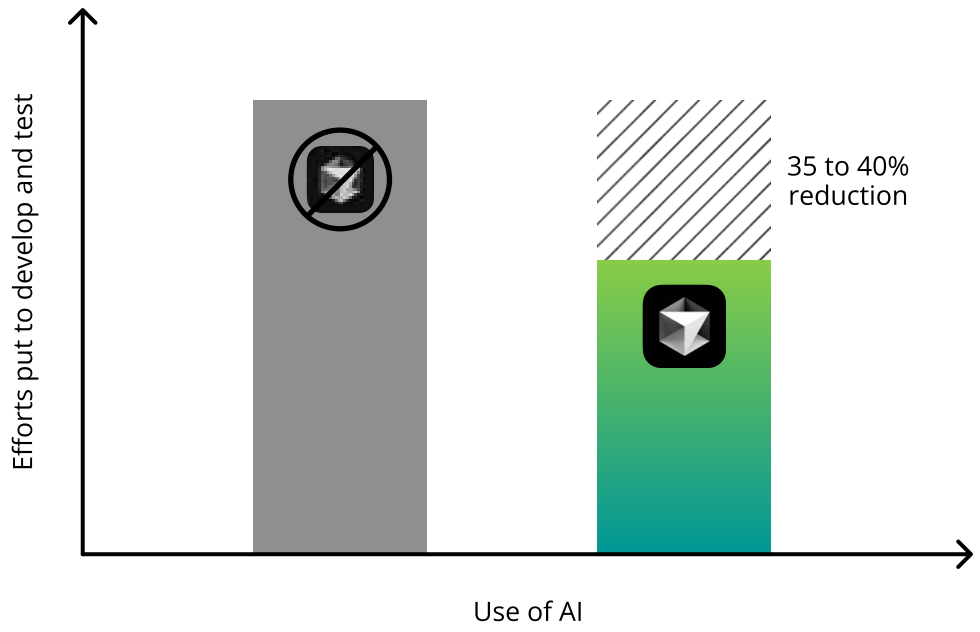
Accelerate code writing and refactoring, thereby reducing development time and technical debt.

Generate new and optimize existing unit test cases.

With the above features of the Cursor AI, we were able to accelerate the development process, thereby improving the developer productivity.

Outcome & Impact

This translated into 35-40% less effort needed for development and unit testing, thereby improving overall quality and performance. This improvement was measured over the sprints during the project execution.



Key Learnings

Although Cursor AI produced quantifiable advantages, we also noticed certain drawbacks:

AI-generated recommendations for intricate code structures were sometimes ambiguous. In such situations, the gains in productivity due to the same amount of work performed as in conventional development were not as prominent as expected.

While the tool was easy to use, there was a fair amount of training required to be imparted to the developers to use the IDE and give correct prompts to get quality output.

Conclusion

This case study illustrates how Cursor AI, an AI-powered tool, can significantly improve software quality and developer efficiency. We were able to speed up development cycles and enable our teams to deliver with more assurance and less effort by incorporating intelligent assistance into our workflow.

With more and more adoption of AI tools, we anticipate even bigger gains in code quality, maintainability, and overall engineering productivity across the SDLC phases.

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