CASE STUDY

Production-ready generation of bug reports, test cases, & checklists

AI Assistants for QA Documentation Automation

PROJECT OVERVIEW

AI agents are designed and implemented to optimize Manual QA processes by generating QA documentation through production-ready assistants across SDLC stages. The initiative began early in the adoption of agentic AI, when practical market solutions were limited.

CLIENT'S NEEDS

Manual QA time was heavily consumed by regression testing and documentation tasks — creating and formatting test documentation, writing detailed bug reports, and documenting test results — reducing productivity and diverting focus from deeper analytical testing.

IMPLEMENTATION

Assessed MCP readiness to manage QA tools (Playwright, Puppeteer) via LLM (Cursor AI).

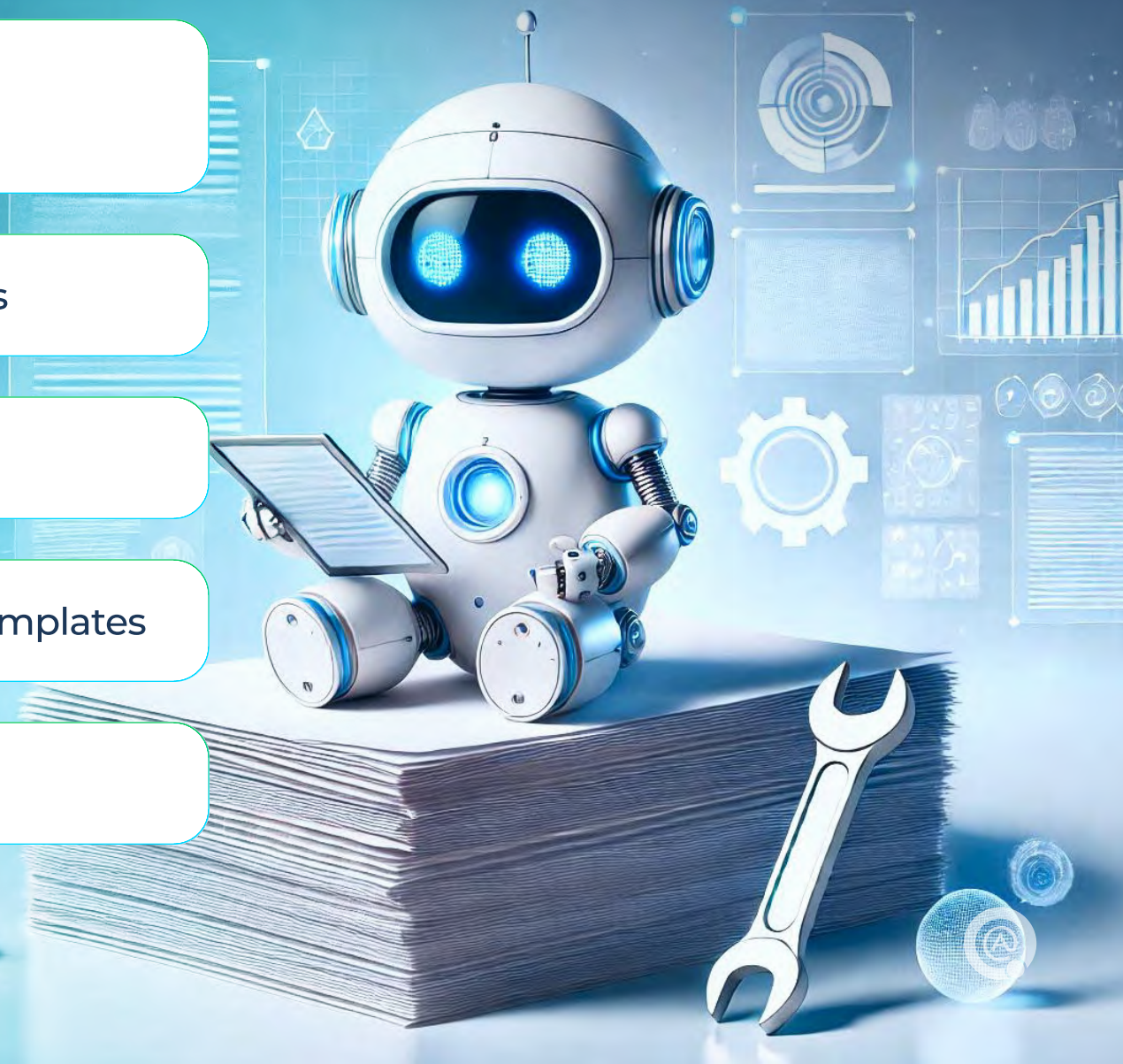
Shifted focus to the most time-consuming QA artifacts and selected three document types: bug reports, test cases, and checklists.

Postponed MCP-driven test execution due to technology immaturity, limited test-case coverage, and high time costs for preparation, maintenance, and validation of autotests.

Involved Manual QA engineers (Middle, Senior, Tech Lead) across different testing directions for real-world validation of generated artifacts.

SOLUTION

- Three specialized LLM-based assistants for QA documentation generation
- Artifact types: Bug Reports, Test Cases, Checklists
- Each assistant is responsible for one artifact type
- Aligned with corporate standards and internal templates
- Running in production with active usage



TECH STACK

OpenWebUI

GPT model

System prompts: XML format (Anthropic best practices)

TANGIBLE RESULTS FOR THE CLIENT

- Three production-ready AI assistants were integrated into daily QA processes, ensuring consistent, stable efficiency gains.
- Noticeable reduction in time spent creating QA documentation.
- AI usage became a standard practice in Manual QA processes.
- Step-by-step workshops, regular Q&A sessions, best-practice guidelines, and internal knowledge-sharing cycles supported adoption.

CONCLUSIONS

The solution was built in an early-maturity AI context with limited market references and limited MCP readiness for production scenarios. Delivery required handling high input variability, sensitivity to small prompt changes, and new validation approaches while keeping outputs aligned with corporate standards.

Want to reduce Manual QA documentation workload with production-ready AI assistants?

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