AI-Powered Automated Documentation Generator for Software Engineering Purpose: Develop a tool that automatically generates clean, structured documentation directly from source code, commit messages, and system logs. Workflow: 1. Developer writes code. 2. AI scans the codebase and extracts functions, classes, parameters, and workflows. 3. The tool summarizes behavior, creates diagrams, and generates Markdown/API docs. 4. AI updates documentation automatically after each commit. 5. Documentation is exported to PDF, HTML, or Confluence. Impact: This tool eliminates outdated documentation, reduces developer workload, and improves onboarding. It ensures real-time accuracy and consistency while boosting software quality. It also helps non-technical stakeholders understand system architecture.