# Technology Stack (Architecture & Stack)

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Team ID: LTVIP2025TMID32090

Project Name: SmartSDLC: AI-Enhanced Software Development Lifecycle

## Components & Technologies

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| S.No | Component | Description | Technology |
| 1 | User Interface | Web-based interaction | FastAPI + HTML/CSS + JavaScript |
| 2 | Application Logic | Code generation, bug fixing, testing | Python(Fast API Framework) |
| 3 | AI Service Layer | Prompt handling, AI outputs | IBM Watsonx Granite 3.3(via API) |
| 4 | Session State | In-memory user data | Streamlit SessionState / Python Dict |
| 5 | File Storage | PDF uploads and static files | Local Filesystem + PyMuPDF (pdf utils) |
| 6 | Security | Key protection | .env file + python-dotenv package |
| 7 | Deployment | Run locally or on cloud | IBM Cloud Foundry / Localhost(uvicorn) |