

3. API and Interoperability Standards

- **OpenAPI 3.0 / Swagger:**

Any RESTful APIs generated as part of backend services conform to OpenAPI specifications, allowing seamless integration, automatic documentation, and validation tools.

- **GraphQL Specification:**

For applications requiring flexible data querying, GraphQL-based APIs are generated following Facebook's official specification.

4. Documentation Standards

- **Markdown Documentation (CommonMark Standard):**

All generated modules are accompanied by structured markdown files using CommonMark syntax for compatibility with GitHub, VSCode previews, and documentation engines like MkDocs.

- **Docstring Standards (Google/Numpy format):**

Inline documentation within functions follows standardized formats that are compatible with documentation parsers like Sphinx or Doxygen.

5. DevOps and Version Control Standards

- **Git Versioning Standards:**

Semantic versioning (SemVer) is used for version tags. The generated repositories follow Git best practices like .gitignore, README.md, CHANGELOG.md, and modular commits.

- **Dockerfile Best Practices:**

When containers are generated, Dockerfiles follow official best practices for multistage builds, caching, and minimal base image usage to optimize runtime.

- **CI/CD Compatibility:**

Generated projects are CI-ready with YAML files compatible with GitHub Actions, GitLab CI/CD, or Jenkins, and include badges for test coverage and build status.