

## Software Development Best Practices Cheat Sheet

by Jack Collier (imnotquitejack) via cheatography.com/105373/cs/21383/

#### Linters

Use rubocop.

Commit linter configuration to project repo for the team to share.

Ensure that linter configuration is integrated into your IDE.

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CodeClimate	Static analysis of code quality, SaaS
SonarQube	Comprehensive static analysis of code quality, can run locally
Ruby Critic	Ruby static analysis gem
Rubocop	Code style analysis & feedback, can integrate with IDE
Semgrep	Static analysis for lots of languages
rails_best_practices	Check the quality of your Ruby on Rails code

#### **Pull Requests**

PRs should be as small and incremental as possible

Include screenshots / animations when appropriate

All CI tests should pass prior to assigning reviewers

Don't take feedback personally! Receiving and learning from criticism is one of the best ways to become a better software developer.

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#### Security

Always stay up to date on the OWASP Top Ten security risks.

Integrate static analysis security tools into CI. Dependency auditing is an easy place to start. Enable Github's Dependabot.

Use the Qualys SSL Server Test to ensure that SSL is correctly configured.

Always require SSL. Let's Encrypt provides free, secure certificates.

Use bundler-audit and brakeman

#### **Testing**

**Unit Tests**: test the output of a single given state

**Functional Tests**: test the output of changes to state

**Integration Tests**: test the results of cross-service interactions from the user's perspective. Use Cypress.

Implement **continuous integration**, which runs all tests, performs static analysis, and automates security audits.

Ensure that test coverage is over 95%.

### Performance

Identify and eliminate N+1 queries. bullet is helpful.

An RPM like New Relic, Scout, or DataDog is great for identifying performance problems.

Ensure that GZIP / HTTP Deflate are enabled and properly configured.

Use Rails caching. It includes easy-to-implement patterns for lots of different types of caching.

Not published yet. Last updated 10th June, 2021. Page 1 of 1.

#### Documentation

README.md must include these sections: Summary, Prerequisites, Infrastructure, ENV Variables, Cron, Gotchas

Use semantic versioning.

CHANGELOG.md should follow https://keep-achangelog.com/en/1.0.0/

Provide well-formatted and sensical **seed** data.

Diagram **complex processes**. Whimsical is great for this.

APIs should have comprehensive Swagger documentation.

Frontends should have **wireframes** prior to writing code.

**Pivotal / Jira** stories document application evolution.

Always consider the perspective of a developer who has never touched this project, but needs to rescue it because you're on vacation.

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