

# SDE-I Phased Action Plan

Testing is ~15% of an SDE-I's job. This plan shows where it fits in the bigger picture.

**60% of testing roadmap (Layer 1 done) = green light to move forward.**

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## SDE-I Day-to-Day Breakdown

- └─ 50% Writing features / fixing bugs
- └─ 15% Writing tests for what you built
- └─ 10% Code reviews
- └─ 10% CI/CD, deployment, monitoring
- └─ 10% Debugging production issues
- └─ 5% Documentation

You write tests **for your own code**, not as your main job.

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## What "60% Testing Done" Means

Testing Roadmap (31 tests total)

- └─ Layer 1 – Core: 15 tests ← DO ALL (non-negotiable)
  - └─ Layer 2 – Context: 7 tests ← Do 4–5
  - └─ Layer 3 – Pipeline: 6 tests ← Do 2–3
  - └─ Layer 4 – E2E: 3 tests ← Skip for now
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60% ≈ 19 tests = Layer 1 complete + half of Layer 2

**Layer 1 complete = foundation is solid. Move on.**

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## Phased Execution Order

### Phase 1 — "Stop Being Amateur"

Do these together. This is ground zero.

- Understand testing concepts (reading strategy docs)

- Write Layer 1 tests (~15 tests)
- Fix secrets (`API_KEY.txt` → environment variables) — 30 min
- Structured logging (`print()` → `logging` module) — 1 hr

↓ MOVE ON after this ↓

## Phase 2 — "Look Professional"

Automation + code quality. This is what shows up on your GitHub.

- GitHub Actions CI/CD (auto-runs tests on every push)
- Type hints + docstrings on all public methods
- `ruff` linting + `pyproject.toml`
- Dockerfile + docker-compose

↓ MOVE ON after this ↓

## Phase 3 — "Impress in Interviews"

Architecture upgrades + documentation that shows design thinking.

- REST API layer (Flask endpoints)
- SOLID refactoring (abstract `LLMProvider` interface)
- `DESIGN_DECISIONS.md` (explain WHY you cache, WHY 5-turn cycles)
- Fill remaining tests (Layer 2-3)

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## Key Insight

You don't "finish" testing before moving to CI/CD or Docker.  
In fact, **CI/CD right after Layer 1 tests** is the smart move —  
your tests run automatically, and your GitHub shows green badges.

Layer 1 tests → secrets fix → logging → GitHub Actions  
↑ This is your Phase 1. Everything else builds on top.