Ethics Reflection: From “Do No Harm” to Reflexive Practice

For a long time, my default definition of an ethical engineer was simple: do not harm people, follow the rules, and meet the standards. That baseline still matters, but it is not enough for how engineering work unfolds. Most ethical problems do not arrive as a dramatic fork in the road. They build through routine choices, small shortcuts, assumptions that go unchallenged, and “temporary” decisions that quietly become permanent. I learned to pay attention to those micro-decisions because they shape safety, usability, and trust just as much as the big, obvious cases.

Part of why this stands out to me is personal. Growing up around technical conversations and watching air-crash investigations with my dad made the pattern clear: major failures often start with minor, explainable steps that add up. That same sequence applies to engineering ethics. What matters is not only whether a design passes a test today, but whether day-to-day decisions keep the project pointed toward protecting the public and communicating honestly as complexity grows.

Ethics as a language

One of the biggest shifts in my thinking is that ethics feels like another language. It is not just about knowing a code of conduct. It is learning how other people reason, what they treat as “obviously acceptable,” what they treat as “never acceptable,” and how they justify tradeoffs when values collide. Even when I disagree with someone’s conclusion, being able to understand their reasoning improves collaboration. Real engineering decisions involve mixed constraints, timelines, budgets, incomplete data, and stakeholder conflict. If I cannot translate between ethical perspectives, I cannot communicate clearly in the moments where it matters most.

That translation work shows up constantly in practice. Different disciplines prioritize different risks. Different organizations tolerate different levels of uncertainty. Different markets and cultures can interpret responsibility, consent, disclosure, and acceptable risk in different ways. Ethical engineering requires enough shared language to align a team before a decision hardens into a design.

My current stance: reflexive principlism supported by duties, virtues, and outcomes checks

If I had to describe my approach now, I would lead with reflexive principlism. For me, that means treating ethics as an ongoing loop rather than a one-time decision tool.

1. Start with principles that do not move: honesty in reporting, respect for safety constraints, clear disclosure of uncertainty, and refusal to mislead.
2. Apply those principles in the small choices of daily work, because that is where ethics usually lives.

3. Zoom out regularly and check consequences across stakeholders: who benefits, who carries risk, what could go wrong, and how the system behaves over time.
4. Correct course early, while changes are still cheap and harm is still preventable.

Within that loop, deontological duties function as guardrails. Some actions are not acceptable even if they look efficient or convenient, especially when they involve hiding risk, manipulating information, or bypassing safety boundaries. Virtue ethics explains what it takes to follow those guardrails when pressure rises. It is one thing to know the right action. It is another thing to have the character to do it when it costs time, status, or convenience. Consequentialism matters at the program and system level because good intentions do not guarantee good outcomes. It forces the question: "What are we actually causing in the real world, and for whom?"

What I want to learn more about: non-Western ethical frameworks
I still think my ethical toolkit has gaps. I want a stronger understanding of Eastern and other non-Western ethical frameworks because engineering is global. When I interface with teams from Germany and India, I can see that expectations around responsibility, hierarchy, risk communication, and "how decisions should be made" do not always map cleanly onto the assumptions I grew up with. I do not want to treat ethics as one universal script that everyone must share. I want to be able to translate, ask better questions, and avoid miscommunication that can become a safety problem later.

How I embody ethical engineering now
In day-to-day work, I try to let virtues guide my routine behavior, then reflect regularly on consequences to make sure my actions are actually serving the public good and the project's real goals.

The virtues I lean on most are honesty, reliability, and civic-mindedness.
Honesty means clear reporting and explicit uncertainty, especially when data is incomplete or results are mixed.
Reliability means following through, documenting decisions, and keeping quality high even when tasks are repetitive.
Civic-mindedness means keeping users and the public in view, not treating them as an abstract checkbox.

Practically, this shows up as habits: writing down assumptions, flagging risks early, asking for help when something falls outside my competence, and keeping documentation consistent as designs evolve. None of these habits are dramatic, but together they reduce the chance that small errors compound into a real failure.

Where I fall short and how I plan to improve

My biggest gap is consistency in the moment. I do not always pause before a small choice that saves time now but creates confusion later. The fix is not to become paranoid. The fix is to build a quick checkpoint habit: before I make a decision that affects others, I should ask what it will cause downstream, what I am assuming, and whether I would be comfortable defending that choice if it became visible later.

I also want to improve how I handle uncertainty. When something is unclear, it is easy to either delay too long or to push forward and "hope it works out." The ethical middle ground is to move forward with explicit constraints: document what is unknown, define what would change my mind, and communicate risk in plain language so the team can make a real decision, not an accidental one.

Conclusion: what "ethical engineer" means to me now

An ethical engineer is someone who can hold duty, character, and consequence together in everyday practice. That means telling the truth clearly, protecting safety boundaries, and staying attentive to the small decisions that accumulate into real outcomes. It also means learning how other people reason about tradeoffs so that engineering teams can align before a system ships, fails, or harms someone.

My final takeaway is simple: mistakes will happen. The ethical difference is whether I own them early, correct course quickly, and prevent small issues from turning into safety, legal, or trust failures.