AI-augmented Engineers

Sudhakar Rayavaram

23 years in designing and building software

ex-Thoughtworker

Co-founder of Sport India, Tarka Labs (tarkalabs.com)

Founder of Samagra Tech (samagra.xyz)

Built VIDURA (vidurabot.com), and building GenAI products

TARKA _LABS   **samagra**   **VIDURA**

Myth Busters

AI Replaces Juniors?

It replaces junior-level tasks;

Juniors who can own loops become mid-level fast

Loop: State the goal → Try a solution → Test it → Fix it → Improve

Prompting is enough ?

Process and evaluation are the job.

Without it, you're just rolling dice with a smarter machine

Foundations don't matter?

They matter more

When AI is wrong, you must know why

Skill Stack

Core CS

Data Structures & Algorithms

Operating System Basics

Networking

DB Fundamentals

Concurrency

Decomposition

Turn fuzzy requirements into

Contracts, constraints and success metrics

Head First OOA&D (Object-Oriented Analysis & Design), Head First Design Patterns

Testing as a habit

TDD with AI

Generate tests and make model pass them

Reading Unfamiliar Code

Trace stacks

Learning how to use debuggers

LLM-assisted code reading

APIs and Glue

REST / GraphQL

Auth, web hooks, queues

CI/CD

Performance & Cost Sense

Profiling

Caching

Batch vs Streaming

Budget caps

Dev Ergonomics

Git hygiene

Issue tracking

Small PRs

Doc comments

Portfolio that signals ability

Ship 3 small but *measured* projects

(each with a README, demo video, eval notes)

Recruiters can see your process, not just the final code

1. Automation

A boring task made 10× faster (show before/after timings).

Ship 3 small but *measured* projects

(each with a README, demo video, eval notes)

Recruiters can see your process, not just the final code

2. AI-aug dev feature

"Smart Search" or "Assistive form fill"

Ship 3 small but *measured* projects

(each with a README, demo video, eval notes)

Recruiters can see your process, not just the final code

3. Agent with tools

Performs a multi-step workflow with
retries + logging + idempotency

Ethics, Safety and Professionalism

Attribution & Originality

Cite AI assistance. Never submit uncredited generated work

Privacy & IP

No sensitive data into third-party tools; check licenses

Eval before deploy

Hallucinations are defects; treat them as such

Academic Integrity

Use AI to *learn* and *debug*, not to *cheat*

GenAI does the typing.

Your edge is in Thinking, testing, and improving.

Thank you

And all the best to the future engineers