

How AI Is Changing Every Software Engineer's Career

By M. Huzaifa Shahbaz
Senior AI Software Engineer

The Age of AI

In next 5 years AI will be so far ahead that even us as GenZ will start losing our minds, we might face what many millennials faced with Internet & Web.

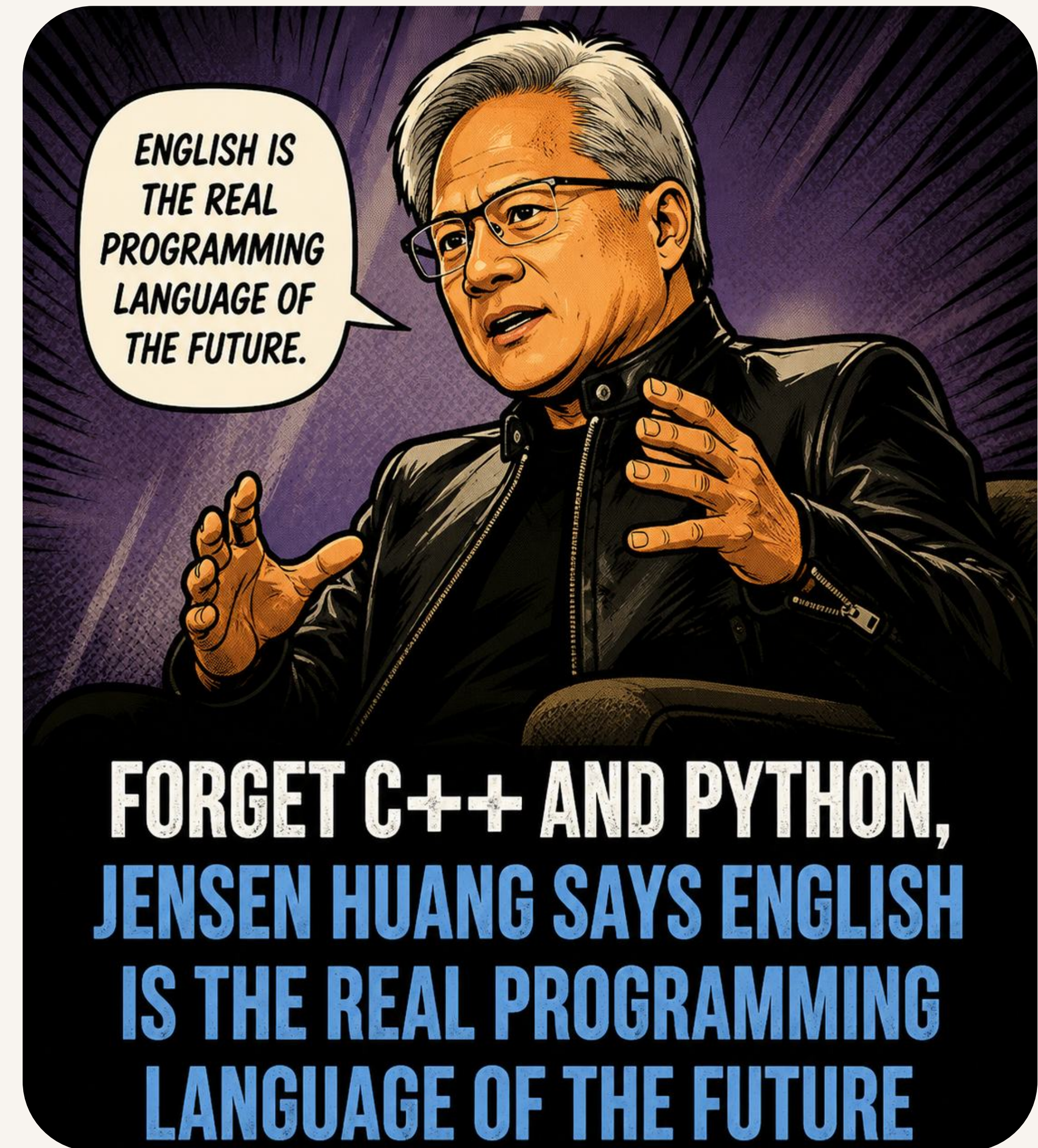
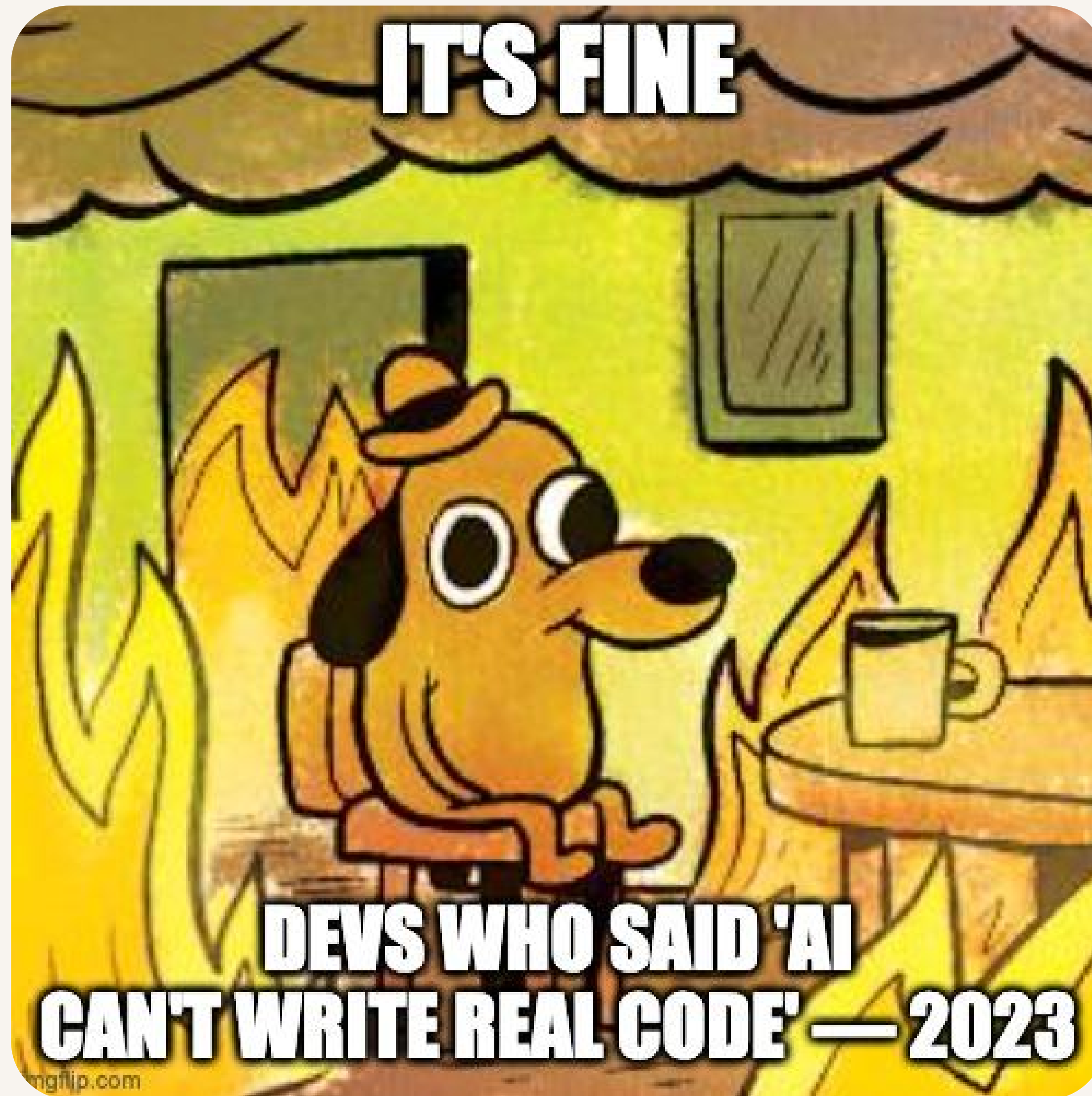
And BERT & GPT-3 is just the beginning of that era.

2021

Bashir A Malik Auditorium, SSUET



What's happening right now?
And how you can be a part of it



And why am I telling?



**Because I have
been doing this for
nearly 7 years**

More than 4 years Professionally*

I hope ChatGPT or Gemini would know me 🥺

else visit: mhuzaifa.com

M. Huzaifa Shahbaz

M. Huzaifa Shahbaz (known online as @mhuzaifadev) is an **AI Software Engineer, tech speaker, and entrepreneur based in Karachi, Pakistan**. He specializes in high-speed engineering, real-time backend development, and deploying production-grade AI infrastructure. [LinkedIn Pakistan · M. Huzaifa Shahbaz +3](#)

Professional Experience

- **AI Systems Engineer:** Currently works at [Digital Dividend Global](#), where he architects scalable, low-latency AI workflows for international clients across the US, Europe, and the GCC region. [LinkedIn Pakistan · M. Huzaifa Shahbaz +1](#)
- **Co-Founder:** He is a co-founder of [Swift Dynamics](#), an organization focusing on AI integration and DevOps engineering. [🔗](#)
- **Tech Speaker:** He regularly leads technical workshops for community initiatives, such as the Google Developer Groups (GDG) "Build with AI" series. His sessions focus on performance-first design, autonomous AI agents, and using tools like Google AI Studio and Cursor. [Instagram · gdgoc.dsu +1](#)

Education & Credentials

- **Academic Degree:** He holds a Bachelor of Science in Software Engineering from Sir Syed University of Engineering and Technology (SSUET).
- **Specializations:** He frequently documents his expertise in Large Language Models (LLMs), agentic workflows, and the practical challenges of running AI systems at scale. [LinkedIn · M. Huzaifa Shahbaz +3](#)

You can track his professional projects and open-source contributions directly on the [M. Huzaifa Shahbaz GitHub Profile](#) or read his insights on the [M. Huzaifa Shahbaz Medium Blog](#). [Medium · M Huzaifa Shahbaz +1](#)

It is not that AI writes code.

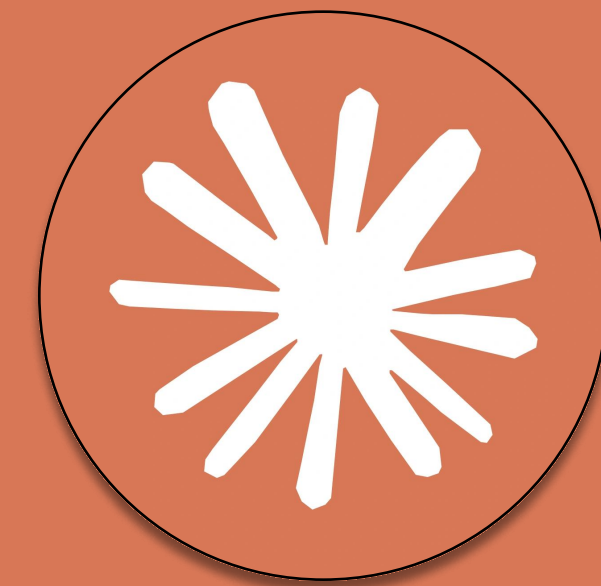
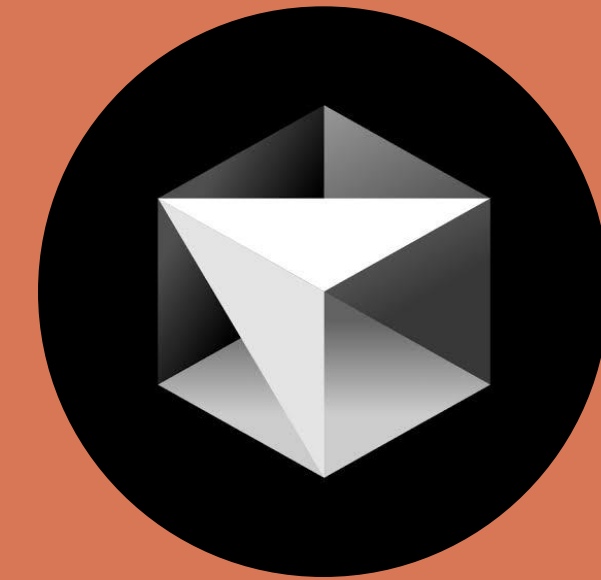
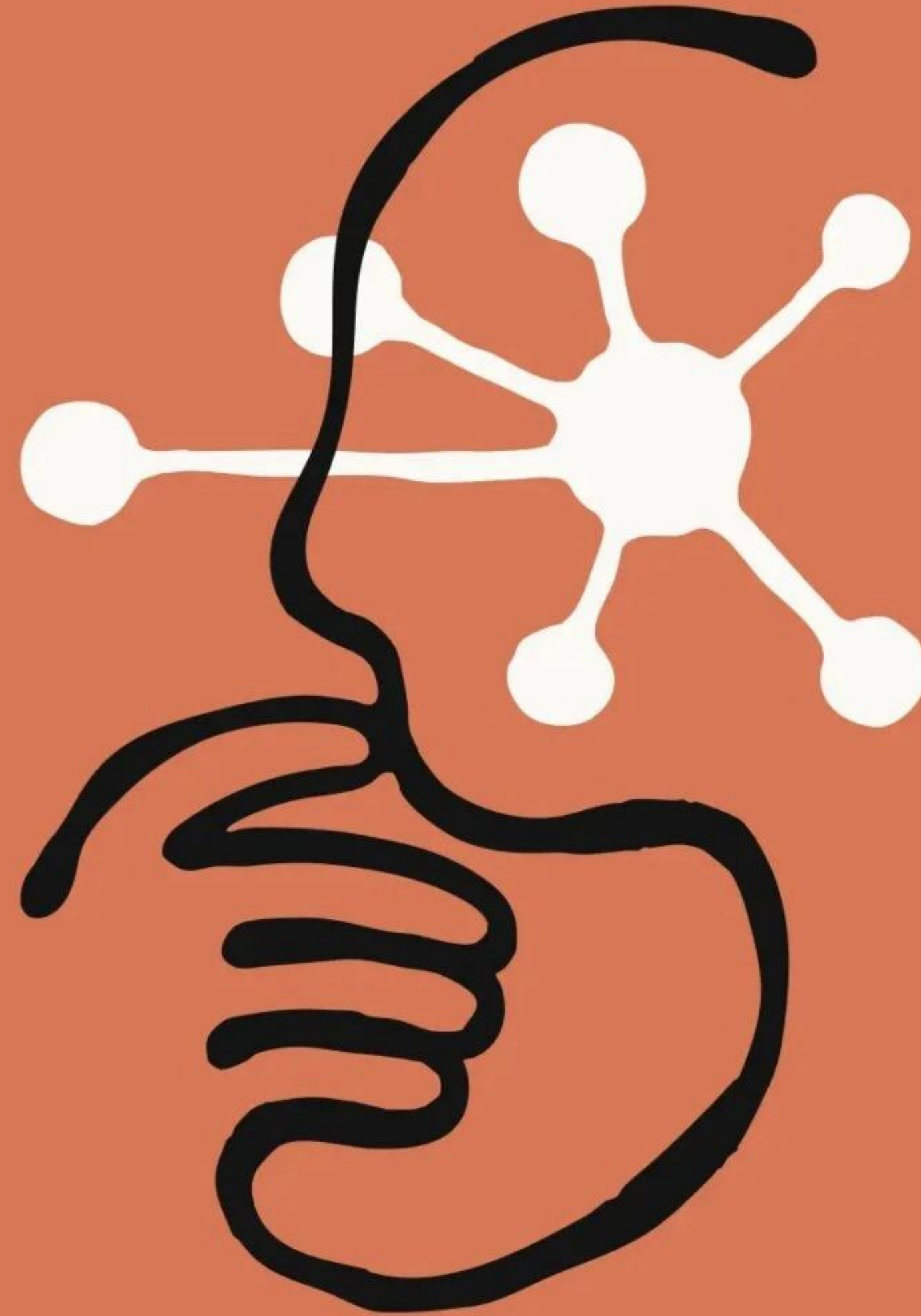
**It is that YOU stopped
being the bottle neck**



Software Engineers are distracted



**Let's build
something
in 5 mins**



The complete SDLC Lifecycle

Nobody:

AI-generated code with a bug nobody can explain:



What does this even do?

Why does it call itself...?

It's like it knows something we don't.

There's no logical flow...

```
ai_generated.py x
def mystery(data):
    flag = True
    for i in range(0, len(data) * 2):
        if (i % 3 == 0 and not flag) or (i % 5 == 0):
            data[i] = rotate_left(
                str(data[i]) + str(i)[::-1]
            ) * (i % 7 + 1)
        elif hash(str(data[i])) % 13 < 7:
            data.insert(i // 2, data.pop(-1))
        flag = not flag if i & 1 else flag
    try:
        return mystery(data[::-1])[::-1] if sum(map(ord,
            str(data))) % 2 else data
    except Exception as e:
        return [mystery([x])[0] for x in data if x is not None] + [e]
```

ERROR: Intermittent failure.
Sometimes works, sometimes... not.

TODO:

- fix bug
- understand AI

CODE
MODE

TRUST
THE

SHIP
IT?

- ☐ YES
- ☐ NO
- ☒ MAYBE

**AI didn't kill
fundamentals**

**It exposed who
never had them**



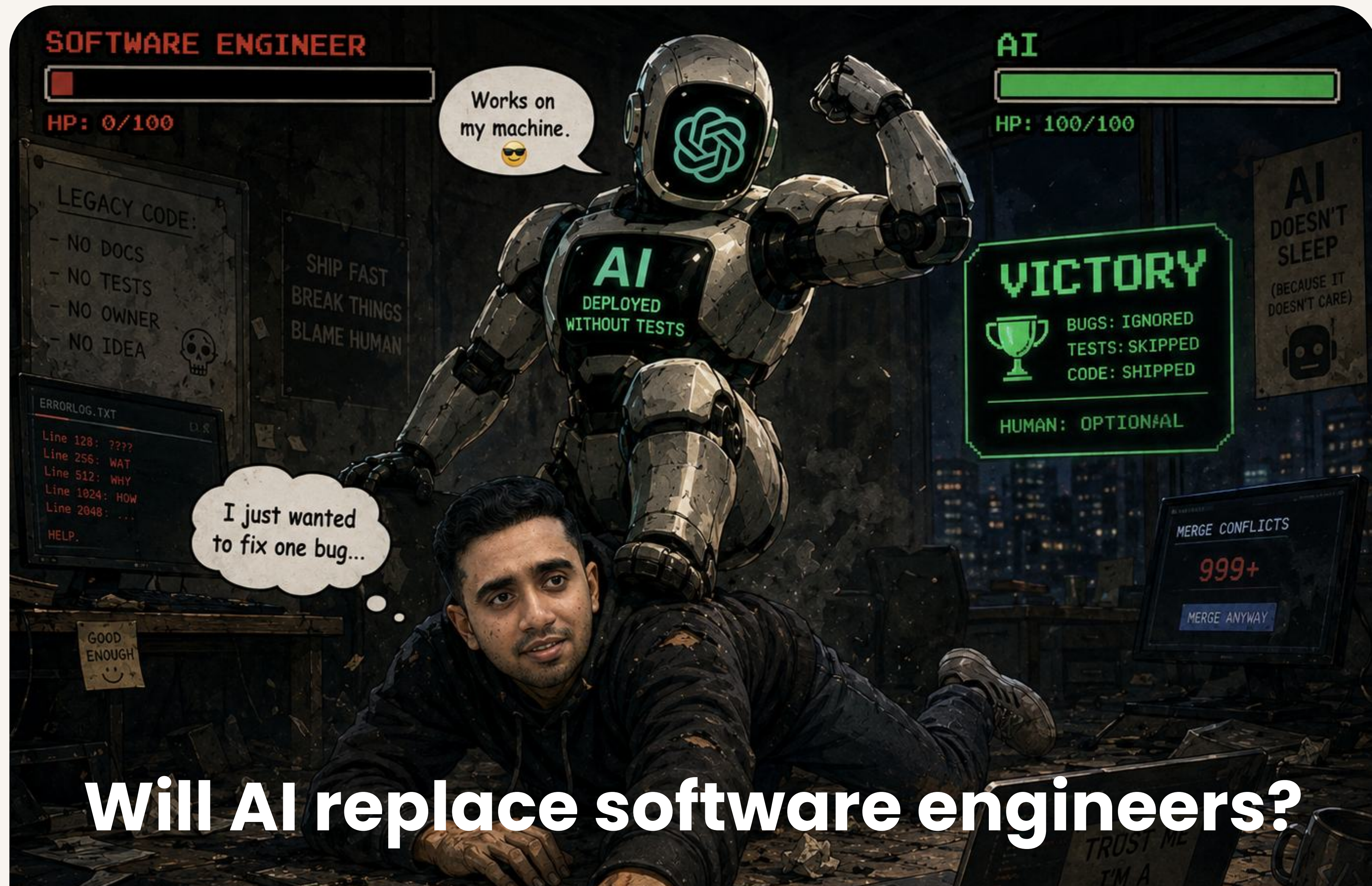
Future is already here

AI Employees

We will see more single person Unicorns by 2030 than ever before



Billion Dollar Question



Will AI replace software engineers?

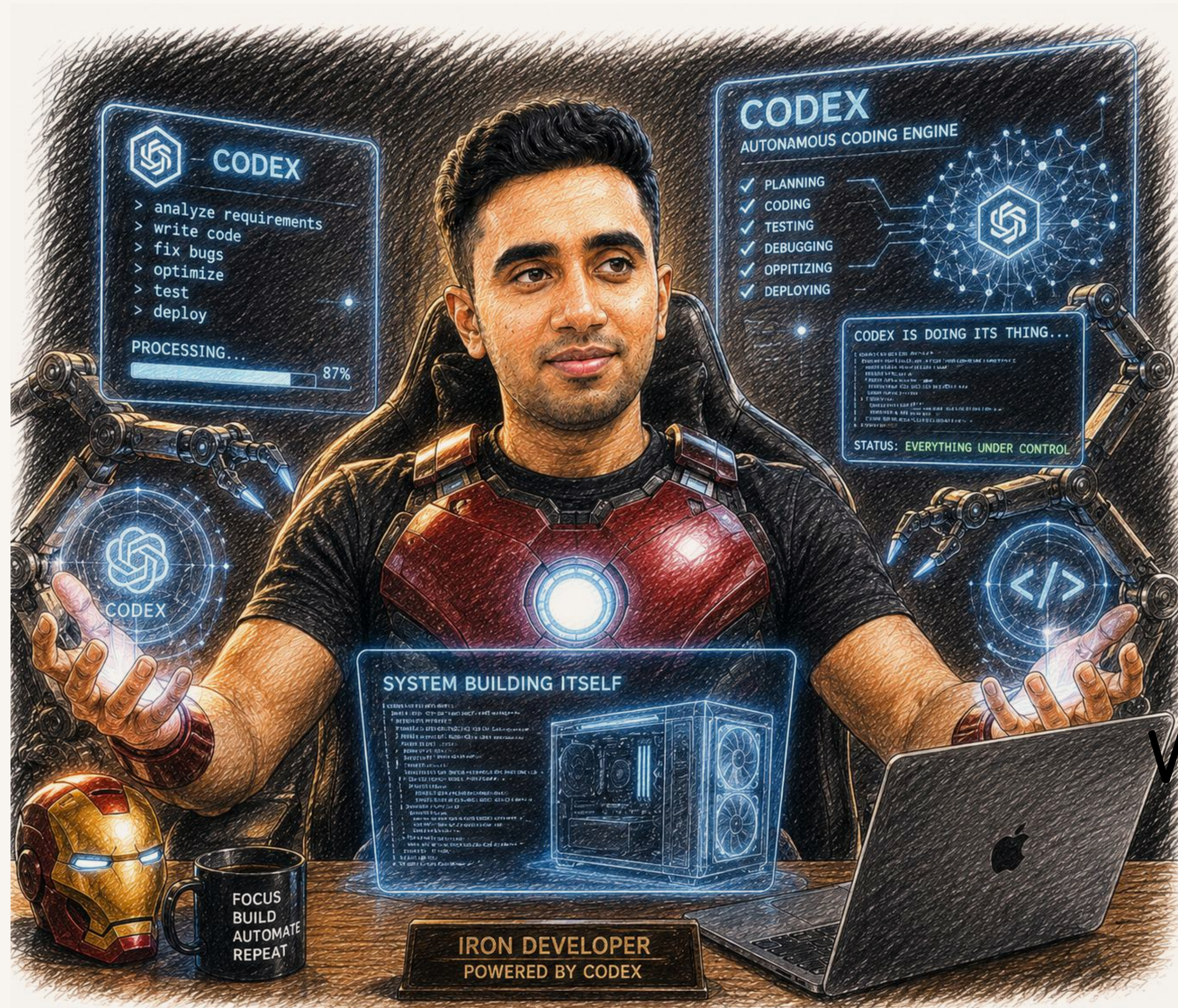
YES

Noone gives a 2 cents for polishing the boots, if they can do themselves.

But they would buy shoes every other quarter

Don't be a puppet. Use AI to leverage your domain

Problem solving
System design
Debugging
Security
Architecture



Product thinking
Communication
Understanding fundamentals
Evaluating AI output
Working with AI agents

Industry has reshaped into a whole different level of domains



Enterprise Systems

NetSuite, Dynamics, Oracle, SAP



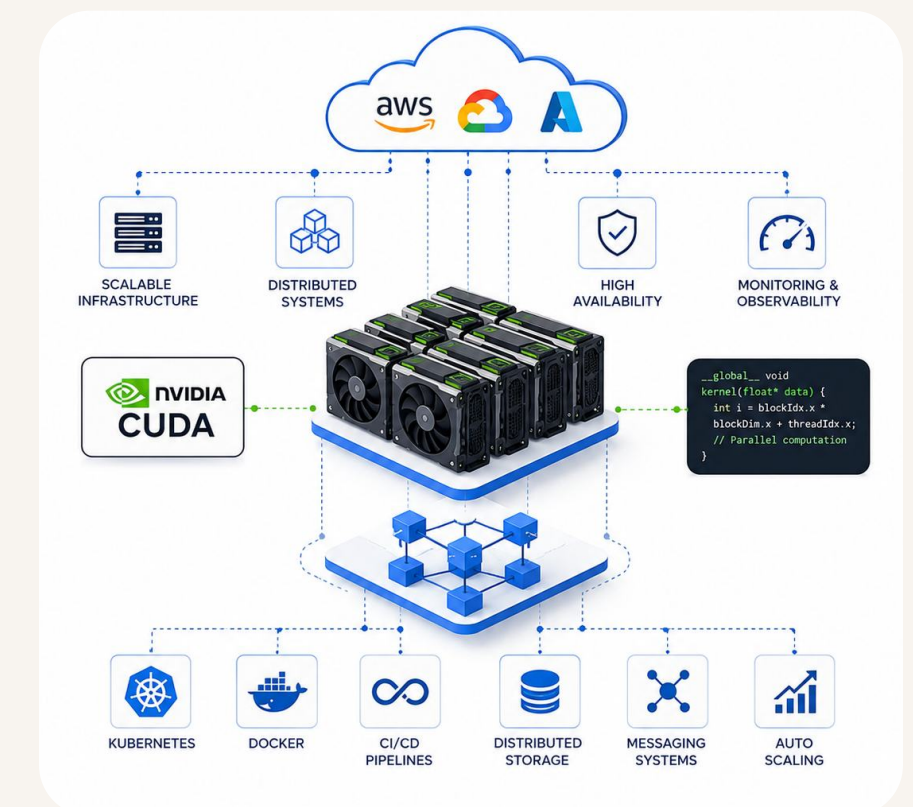
AI/ML Research & MLOps

Model development, evaluation,
inference infrastructure, deployment,
monitoring



Forward Deployed Engineering (FDE)

Engineers working directly with
customers to solve messy, real-world
problems using software + AI



AI Infrastructure / Platform Engineering

GPU/cloud infrastructure, Distributed
systems, CUDA

AI in 2030



Smarter Systems. Real Impact. Infinite Opportunity.

1 FOUNDATION MODELS WILL COMMODITIZE HARDER

- ✓ Model quality gap shrinks
- ✓ Huge context windows
- ✓ Multimodal by default
- ✓ Agents become native

Translation:
Owning the model will matter less unless you're elite-tier research.

BIG OPPORTUNITY?
BUILD ON TOP.
Not sexy. Very profitable.



2 AI ENGINEERS WILL SPLIT INTO 3 CLASSES

A AI INTEGRATORS (LARGEST DEMAND)



- Orchestration
- Memory systems
- Evals
- Enterprise integration
- Tool calling
- RAG
- Workflows

TURN MODELS INTO BUSINESS SYSTEMS
Replace 8 employees in this workflow.



B AI SYSTEMS ENGINEERS (UNDERRATED)



- Inference optimization
- Quantization
- GPU efficiency
- Edge AI
- Distributed serving
- Fine-tuning infra

Companies will bleed money on compute. Who saves them 40%? **YOU.**



C FRONTIER RESEARCHERS (SMALLEST BUT HIGHEST LEVERAGE)



- Mechanistic interpretability
- RL
- Alignment
- Synthetic data generation
- Post-training
- Reasoning architectures

This is where breakthroughs happen. But brutal competition.



3 AGENTS WILL MOVE FROM "DEMO" TO "OPERATIONS"

Current Agents = Demos



- Unreliable
- Inconsistent
- Overhyped

In 3 Years = Operations



- Reliable
- Cheap
- Deeply Integrated

Industry Move:
AI COWORKERS > AI ASSISTANTS

They will:



4 VERTICAL AI IS WHERE ENTREPRENEURS SHOULD ATTACK

Bad Startup:
"AI for everyone" ❌

Good Startup:
"AI for freight forwarding in Pakistan" ✅



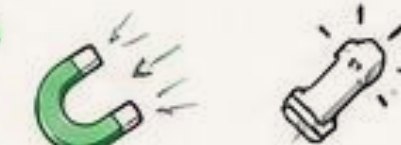
The money is hidden in boring industries.
BORING = RICH. ALWAYS.

5 SYNTHETIC HUMANS / AI PERSONALITIES EXPLODE



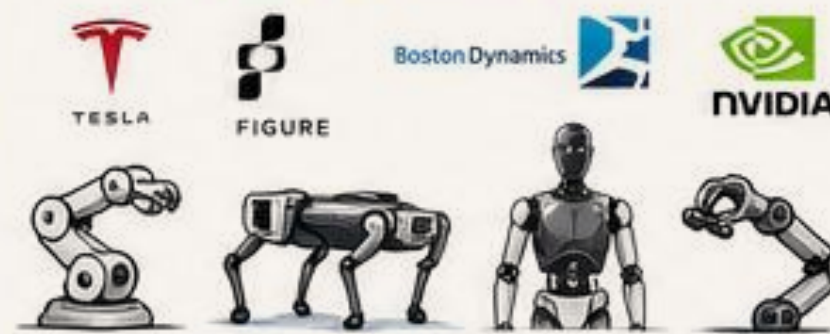
- AI Sales Reps
- AI Influencers
- AI Tutors
- AI Companions
- AI Therapists
- And more...

Creators who understand **ATTENTION + AI** will dominate.



DISTRIBUTION + PERSONALITY = HUGE MOAT

6 ROBOTICS WILL QUIETLY BECOME MASSIVE



AI + Physical World = Next Giant Layer

Software people who learn:

- Vision
- Planning
- Real-world Action Models

will have a serious edge.



7 PERSONAL KNOWLEDGE SYSTEMS WILL MATTER



Imagine your whole career, thoughts, meetings, code, ideas — searchable and actionable.

This will become normal. **MASSIVE MARKET.**



WHERE THE INDUSTRY IS MOVING

- COMMODITIZATION OF MODELS
- RISE OF AI COWORKERS
- VERTICAL & DOMAIN FOCUS
- SYNTHETIC HUMANS & CONTENT
- PHYSICAL AI & ROBOTICS
- PERSONAL KNOWLEDGE LAYERS

THE NEXT WINNERS:
BUILD. OPERATE. DISTRIBUTE. DOMINATE.



IF I WERE YOU (BASED ON PROFILE)

PRIMARY (CAREER)

- ✓ Agentic Systems
- ✓ Multimodal Pipelines
- ✓ Evals
- ✓ Enterprise AI Architecture
- ✓ Model Optimization

This gets you hired globally.



SECONDARY (WEALTH)

Build content around:
"Building AI in Public"

- Real systems
- Real failures
- Real experiments



LONG-TERM (BIG UPSIDE)

Pick one vertical. Then dominate.

- ✓ AI for Universities
- ✓ AI for Immigration
- ✓ AI for SMB Automation
- ✓ AI for Hiring



Stop competing with 10 million prompt engineers.



Be an OPERATOR.
Understand business deeply.



YOUR EDGE RIGHT NOW? YOU'RE EARLY ENOUGH TO MATTER.



BUT THE WINDOW IS CLOSING FAST.

NEXT 18-24 MONTHS ARE DISPROPORTIONATELY IMPORTANT.



This was the quick glimpse of

The Effect of AI

Adapt today

**else your kids will say how stupid & blind our parents
were for not adapting according to AI at the right time**

Break the chain



mhufaifa.com/iqram9
Keynote Slides



Let's connect



Let's exchange reels xD