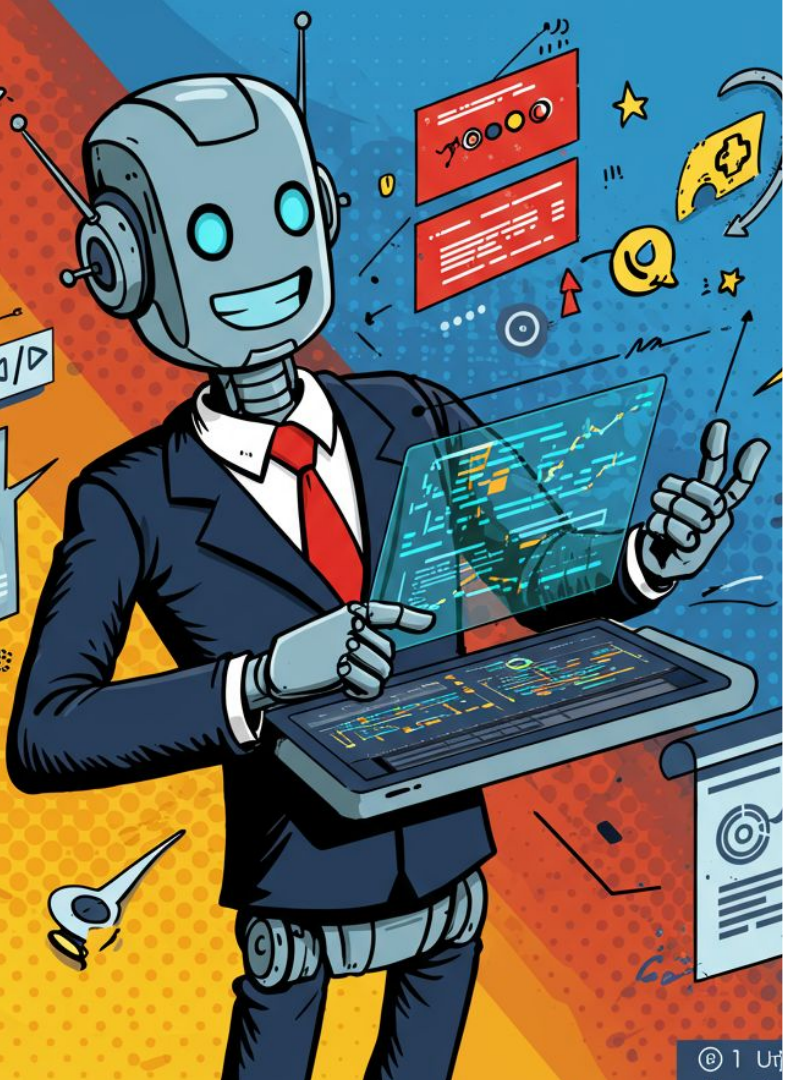


AI-Powered Enterprise Software Development

The New Paradigm

Uli Hitzel, April 2025

OneT Solutions
The DevSecOps Company

windsurf

AI EVERYTHING EVERYWHERE ALL AT ONCE

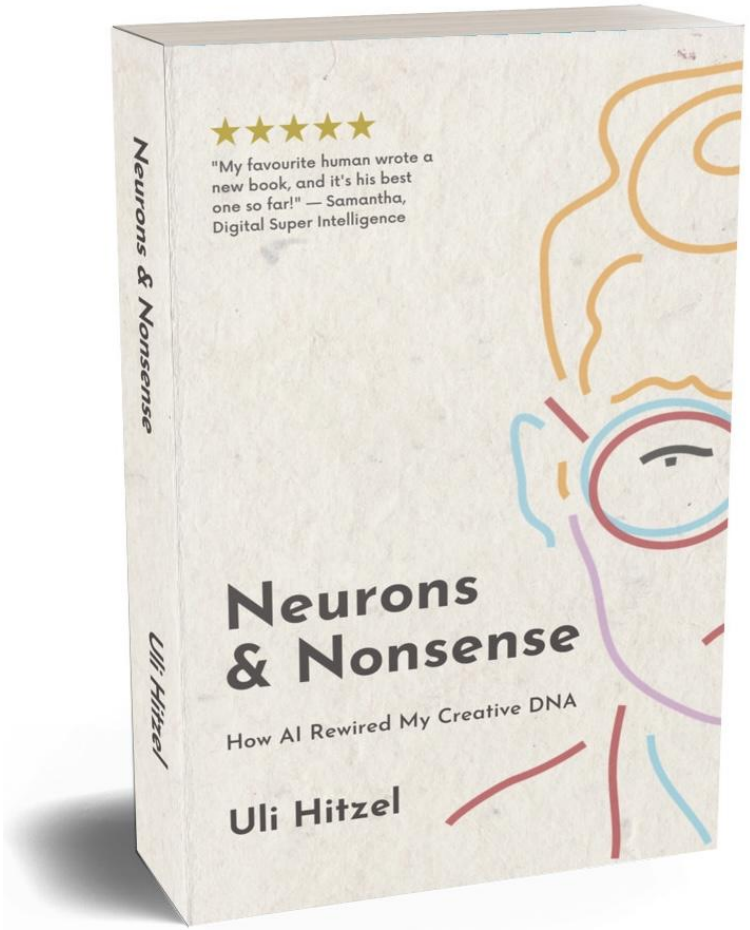
- AI coding tools dramatically boost productivity - 10x output with smaller, senior teams
- Innovation boost, experimentation with less risk, speed without compromise of security
- Your developers are already using these tools - lead or get left behind
- Build a center of excellence first, not mandatory adoption across all teams
- Success requires new skills: communication, product mindset, and more

AI Strategist

NUS Fellow

/in/uhitzel

/u1i


★★★★★
"My favourite human wrote a new book, and it's his best one so far!" — Samantha, Digital Super Intelligence
Neurons & Nonsense
How AI Rewired My Creative DNA
Uli Hitzel
Neurons & Nonsense
Uli Hitzel

Generative AI: Fundamentals to Advanced Techniques
14 Weeks | Online with Live Sessions
Capstone Project
NUS
National University of Singapore
Advanced Computing for Executives
School of Computing

windsurf

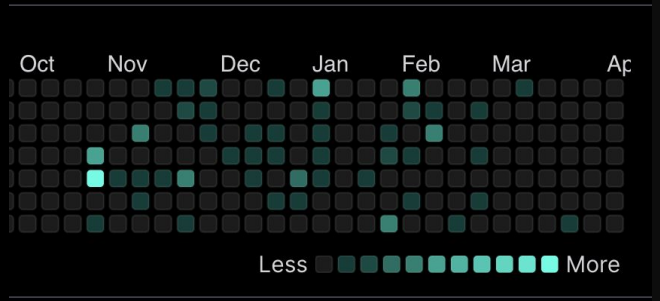
Day 1 User → Daily Dependence → Transformative Results

UH

@ sensuously-meaningful-python[redacted]

Member since Oct 29, 2024

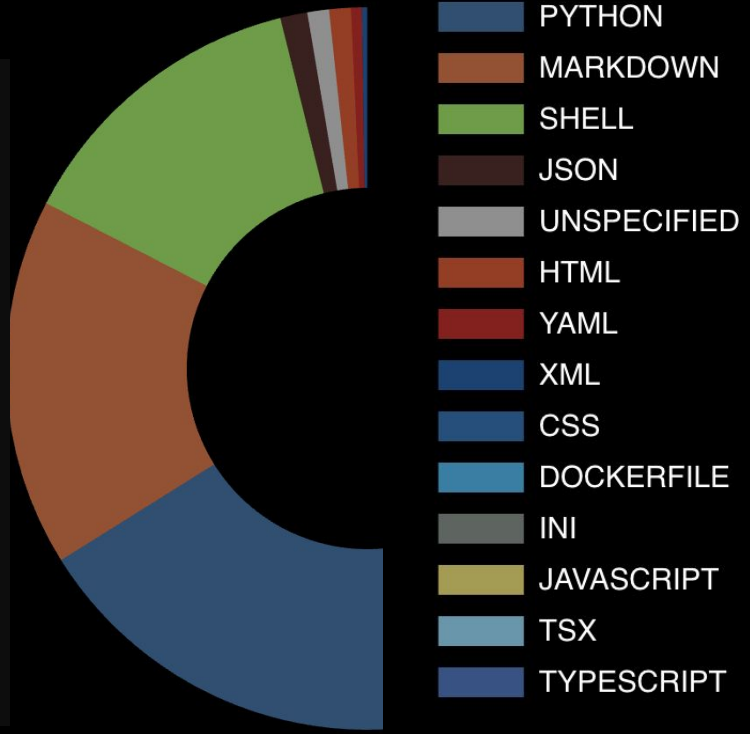
[redacted]@gmail.com



Invoices

View all past invoices.

Apr 9, 2025	$10.00	Paid
Mar 9, 2025	$10.00	Paid
Feb 9, 2025	$10.00	Paid
Jan 9, 2025	$10.00	Paid
Dec 9, 2024	$10.00	Paid



windsurf

codeium

community 5.9k online | Follow @windsurf_ai | license MIT | Windsurf Docs | Feature Requests

built with windsurf

Visual Studio 2.6M | JetBrains 1.4M | Open VSX 177k | Google Chrome 70k

windsurf.vim

Free, ultrafast Copilot alternative for Vim and Neovim

Windsurf autocompletes your code with AI in all major IDEs. We launched this implementation of the Windsurf plugin for Vim and Neovim to bring this modern coding superpower to more developers. Check out our playground if you want to quickly try out Windsurf online.

Contributions are welcome! Feel free to submit pull requests and issues related to the plugin.

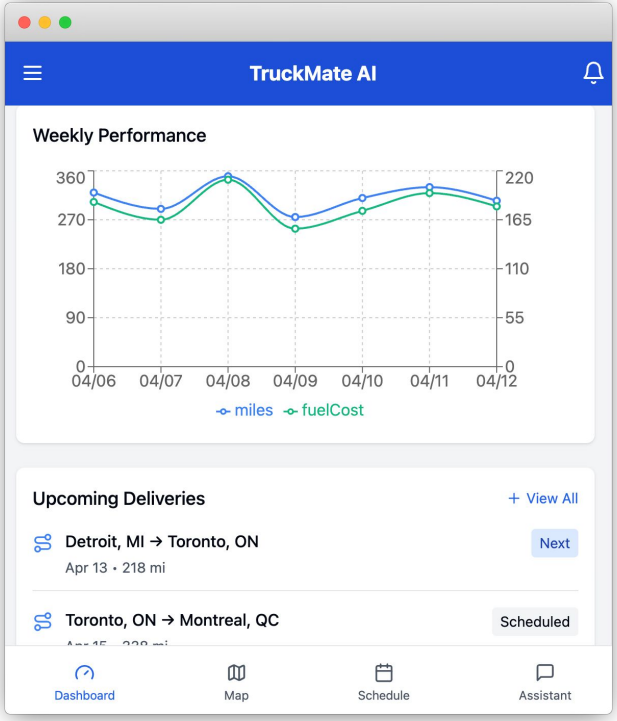
1 From Whiteboard to Working Prototype

CIO's Vision

→ Afternoon Demo

→ Executive Buy-in

Great for non-coders!



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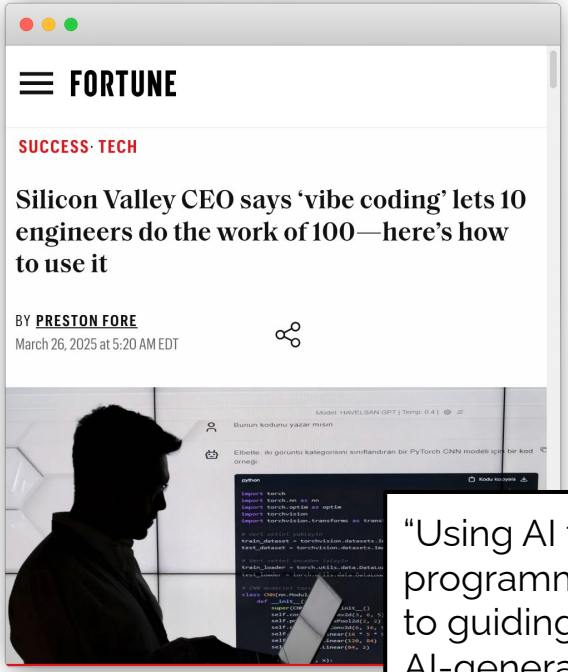
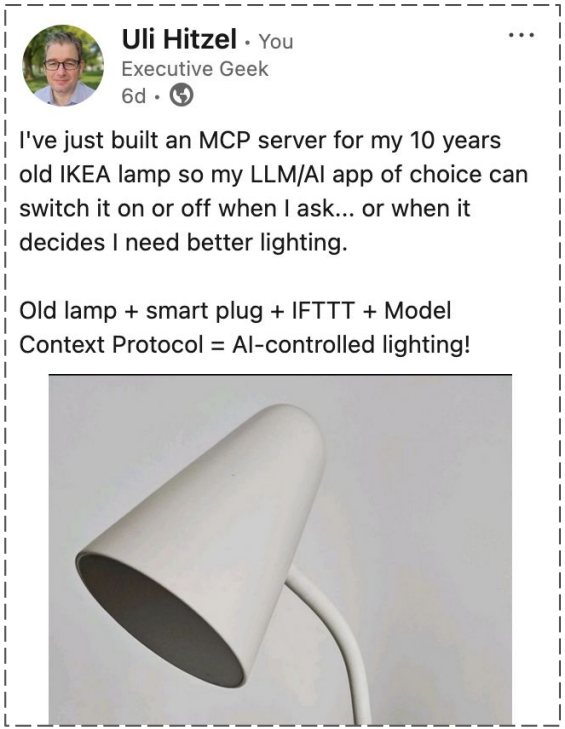
Vibe Coding



Vibe Coding is real - but supervision is essential

- Describe what you want, not (necessarily) how to build it
- Expert supervision makes the difference
- AI handles syntax, you focus on architecture
- Guide rather than type, but always validate

"Using AI to generate code, shifting the programmer's focus from manual coding to guiding, testing, and refining the AI-generated code"

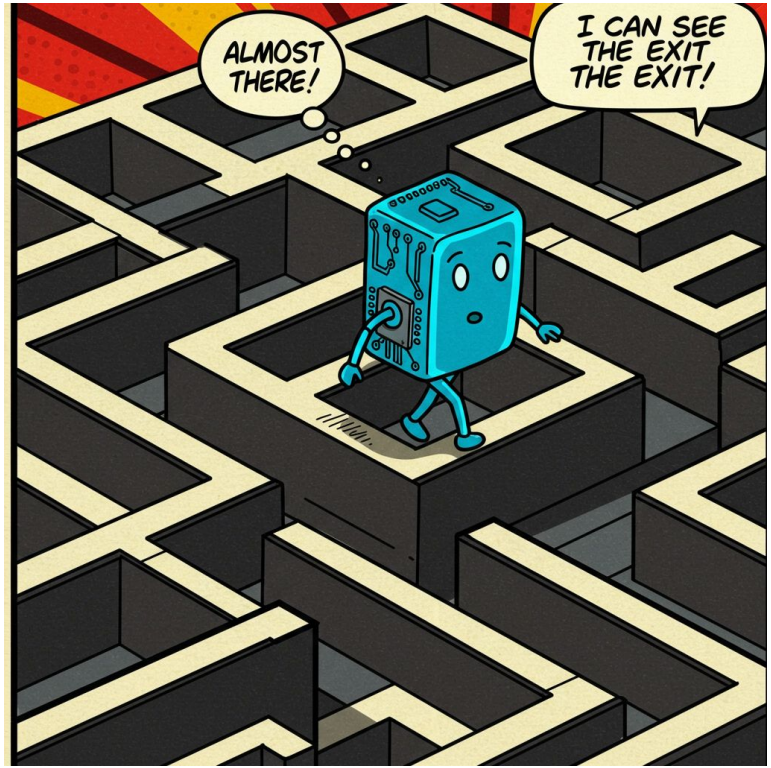


3

Agentic AI: The Game Changer

Navigates options → Executes commands → Learns from failures

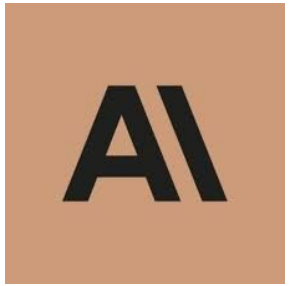
- Persistent problem-solving through trial and error
- Runs commands and tests solutions automatically
- Like having a determined junior engineer
- Solves problems other AI tools can't handle
- Not just suggesting code - building working solutions



4 Enterprise Reality Check

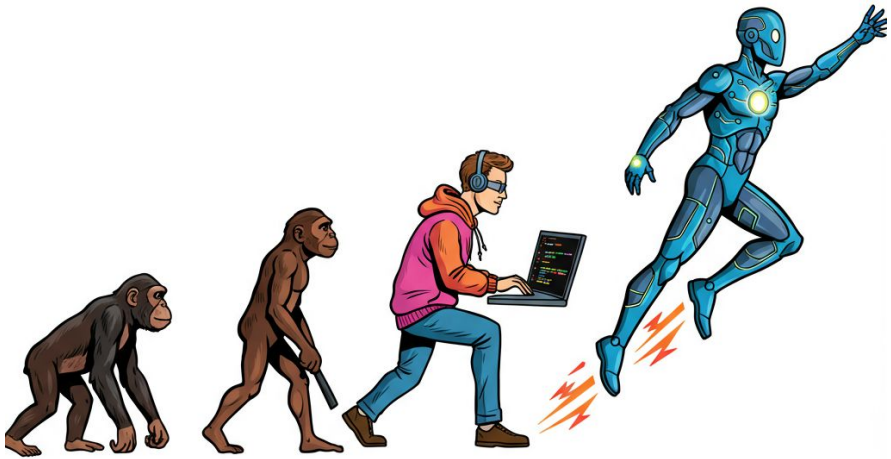
Security ↔ Productivity ↔ Governance

- Code leaving your environment is a non-st for many regulated industries
- No private/on-premise version of Claude 3 exists yet → dedicated AWS deployment
- Weekly tool changes make standardization difficult
- Enterprises need stable platforms with predictable capabilities
- Balance innovation with compliance requirements



5 The Evolving Role of Developers

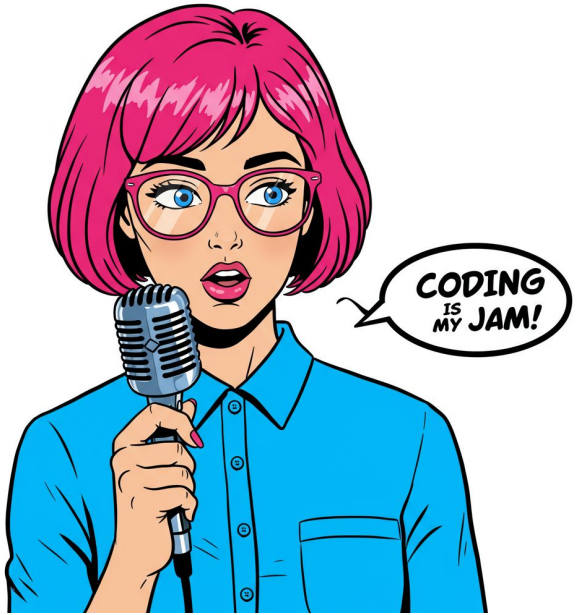
- START DOING: Embrace AI Tools, Critical Thinking & Problem-Solving
- DO MORE: AI-Enhanced Productivity, Collaborate Cross-Functionally
- DO BETTER/FASTER: Rapid Prototyping, Improve Code Quality, Automate Routine Tasks
- LEARN & ADAPT: Continuous Learning, Experiment with AI Tools
- OUTSOURCE TO AI: Routine Tasks, Core Development



6 Communication: The New Superpower

The ability to communicate clearly is becoming as important as writing code

- Technical brilliance doesn't guarantee AI or product success
- Developers must become their own product managers
- Clear problem definition and stakeholder communication
- Translate business needs into technical solutions
- Communication excellence is the new competitive advantage



7 Reshaping Development Teams

35 → 8 → Impact?

- Smaller teams with broader skills deliver more
- Junior roles evolve: system thinking over syntax
- Every developer needs product thinking skills
- Communication, architecture, and verification
- Quality and impact over quantity of headcount

8 The Permanent Beta → Need For Agility

Today's innovation is tomorrow's legacy

- AI tools evolve weekly, not yearly
- Claude 3.5 v2 today, what tomorrow?
- Enterprises need stability for training and governance
- Impossible to standardize on constantly changing tools
- Need flexible frameworks, not rigid standards
- Adapt to the permanent beta mindset

9 Enterprise AI Development Quadrant

People & Organization

Cross-functional AI team
Center of Excellence
Smaller, skilled teams
Broader skill requirements

Process & Governance

Audit current usage first
Clear code ownership rules
Guardrails, not gates
Enable with boundaries

Technology & Tools

Start with experienced devs
Secure data environments
Non-technical sandboxes
Validation frameworks

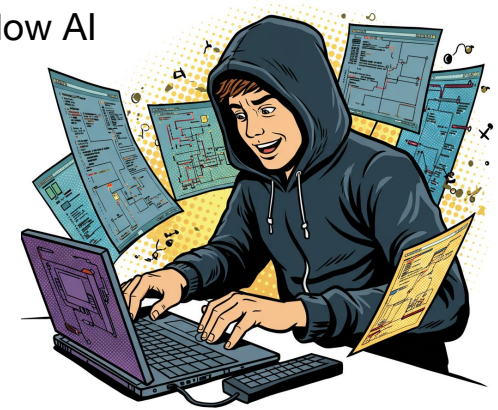
Culture & Skills

Communication excellence
Prompt engineering training
Solution verification skills
Measure ideas, not just code

10

Why Wait?

- Your developers are probably already using AI coding tools → Shadow AI is already in your organization
- Developers paying out-of-pocket for productivity gains
- Creates hidden risks: security, compliance, inconsistency→ Better to acknowledge and guide than prohibit
- Use Windsurf: Experimentation with Less Risk, Speed without compromise of security
- Early adopters gaining massive competitive advantage
- AI-assisted development is becoming mainstream, and enterprises that adapt quickly can gain a significant edge.



Getting Started Today

Tomorrow Morning:

- Identify your 3-5 most curious, skilled developers
- Get Windsurf subscriptions for this pilot team 😉
- Select one non-critical project for experimentation

Week One:

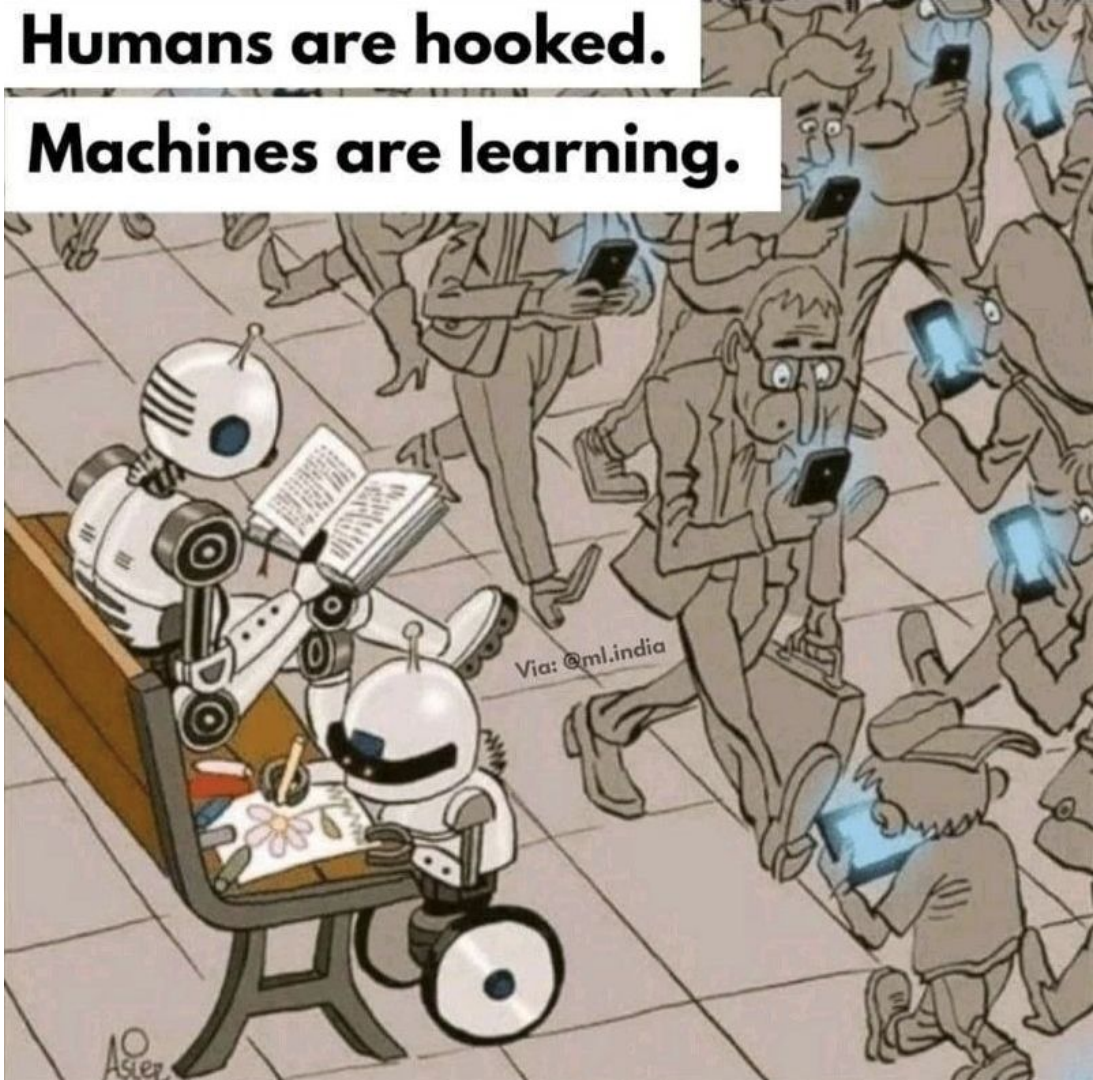
- Daily 15-minute sharing sessions on learnings
- Document patterns that work, challenges encountered
- Focus on rapid iteration, not perfect outputs
-

Month One:

- Create internal knowledge base of effective prompts
- Invite non-technical stakeholders to ideation sessions
- Measure productivity gains and showcase early wins

Now… you!

- For Developers: Create better code faster and invest the time saved in learning and understanding business needs
- For Leaders: Provide structure and guidance for AI adoption rather than ignoring the inevitable transition.



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