Vibe Programming

```python
module = Module(
    code="ELEE1149",
    name="Software Engineering",
    credits=15,
    module_leader="Seb Blair BEng(H) PGCAP MIET MIHEEM FHEA"
)
```

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What is it?

Vibe [programming] (OpenAI, Andrej Karpathy, 2025)

- It's not too bad for throwaway weekend projects, but still quite amusing. I'm building a project or webapp, but it's not really coding — I just **see stuff**, **say stuff**, **run stuff**, and **copy paste stuff**, and it *mostly* works

- Vibe programming refers to AI-augmented or AI-dependent programming workflows where the user relies on natural language prompts, generated code snippets, and automated completions to develop software systems, often without fully understanding the underlying code mechanics.

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Do I need to learn programming?

Impacts | Costs

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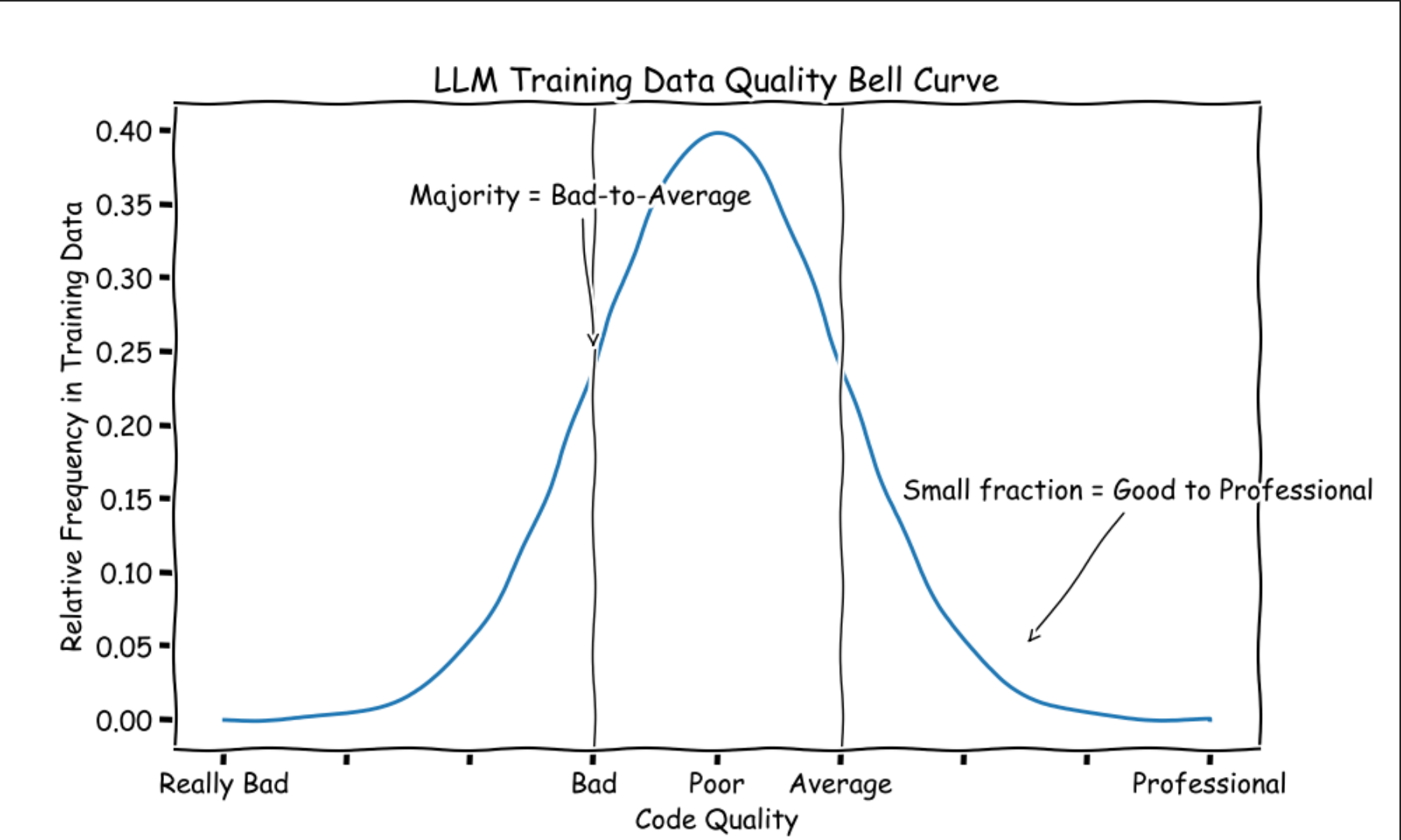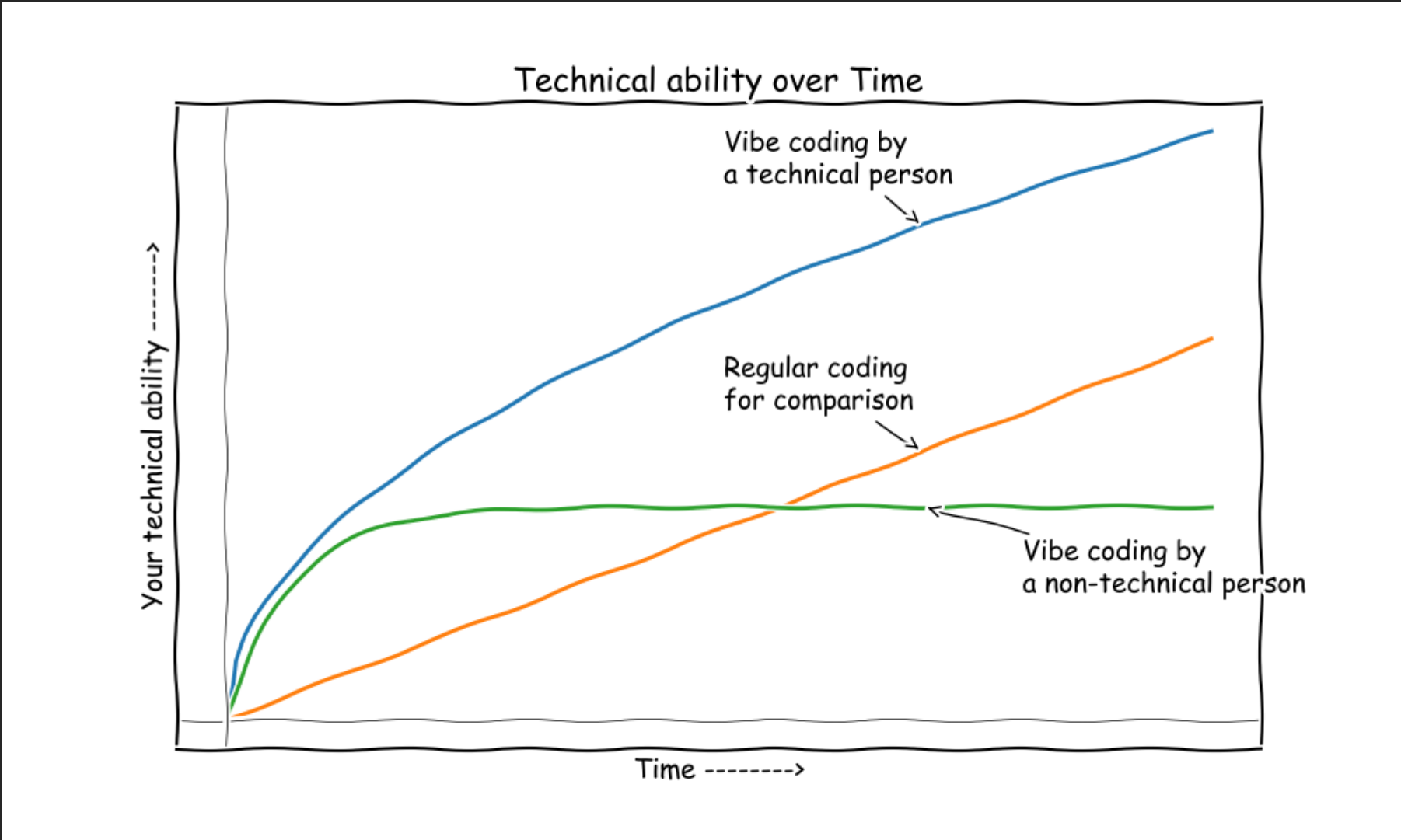
Impact Area	Why It's Critical
Energy consumption	Datacenter electricity use is skyrocketing; clean grid only partly mitigates the impact
Hardware emissions	Manufacturing GPUs, memory, and specialized hardware generates huge embodied emissions
Water + resources	Cooling, semiconductor fab, and supply chains intensify water and raw material demands
Systemic rebound	Efficiency alone leads to more demand, not less environmental impact
Governance gap	Lack of unified regulation allows unchecked, unsustainable expansion

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https://mit-genai.pubpub.org/pub/8ulgrckc/release/2

Year	Global Datacenter Electricity Use (TWh/year)	Datacenter Power Capacity (MW)
2010	~194 TWh	
2018	~204 TWh (despite ~6× increase in capacity)	2,688 MW
2022	~460 TWh	5,341 MW (nearly doubled)
2026 (proj.)	620–1,050 TWh (base ~800 TWh)	+12,000 MW (global)

Google reported in 2021 that its U.S. datacenters consumed 12.7 billion liters of water

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https://mit-genai.pubpub.org/pub/8ulgrckc/release/2

Model	Approximate Training Energy Use
GPT-3	~1,287 MWh (≈ energy use of ~120 U.S. homes/year)
GPT-4 (likely)	Higher (exact not disclosed, but >2× GPT-3 likely)

Unit	CO_2 Emissions (Estimate)
Single GPT query (simple)	~2-4 g CO_2
Single GPT query (complex, multi-turn)	~10-50 g CO_2

https://mit-genai.pubpub.org/pub/8ulgrckc/release/2

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Costly Errors

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Last week, we asked Devin to make a change.
It added an event on the banner component
mount, which caused 6.6M posthog events in
one week, which will cost us $733.
Devin costs $500 + $733 = $1273

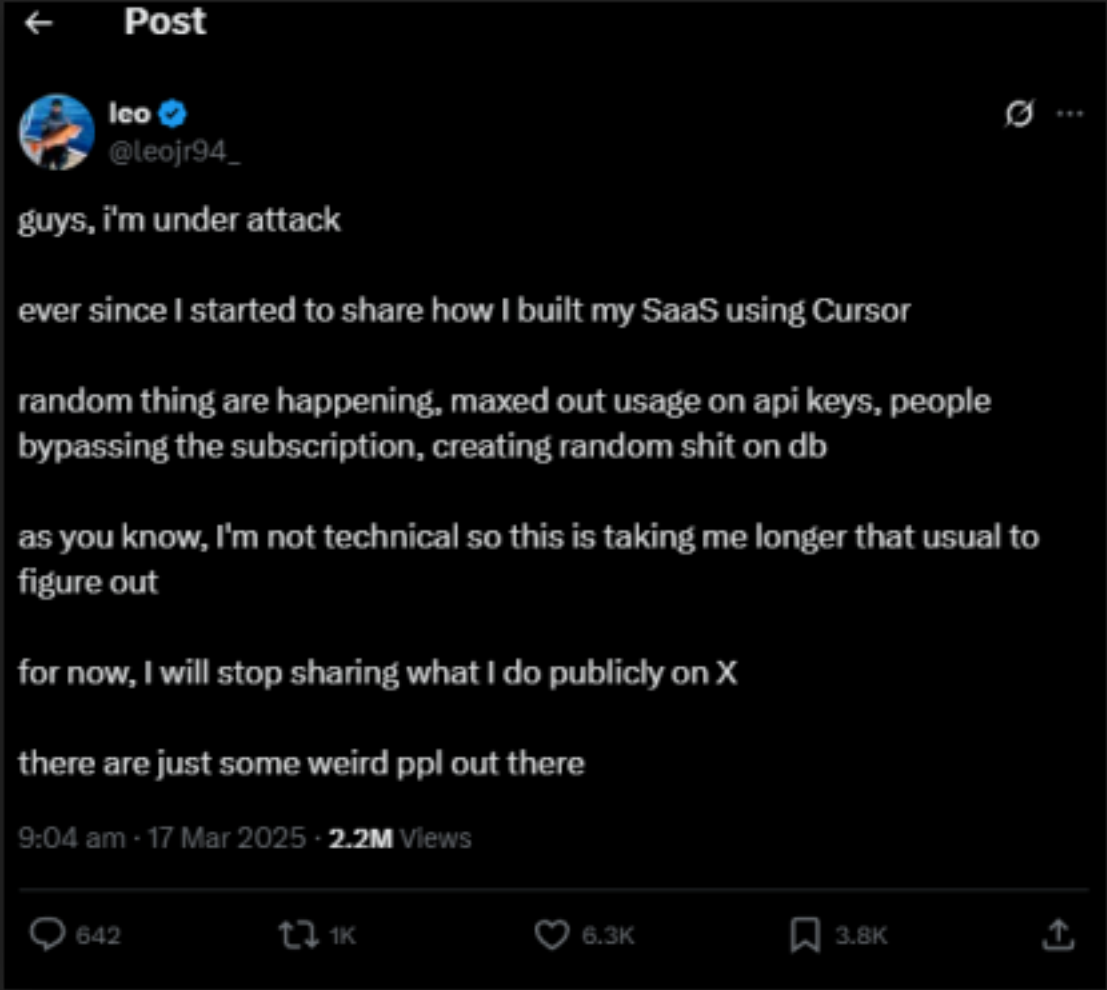Lesson - Review AI-generated code multiple
times

Anurag Bhagsain (2025)

https://x.com/abhagsain/status/1876362355870994538

← Post

leo ✔
@leojr94_

my saas was built with Cursor, zero hand written code

AI is no longer just an assistant, it's also the builder

Now, you can continue to whine about it or start building.

P.S. Yes, people pay for it

4:34 am · 15 Mar 2025 · **97.6K** Views

💬 81   ⟲ 46   ♡ 622   🔖 355

← Post

leo ✔
@leojr94_

guys, i'm under attack

ever since I started to share how I built my SaaS using Cursor

random thing are happening, maxed out usage on api keys, people bypassing the subscription, creating random shit on db

as you know, I'm not technical so this is taking me longer that usual to figure out

for now, I will stop sharing what I do publicly on X

there are just some weird ppl out there

9:04 am · 17 Mar 2025 · **2.2M** Views

💬 642   ⟲ 1K   ♡ 6.3K   🔖 3.8K

leo ✔ @leojr94_ · 20 Mar
i'm shutting down my app 😔

Cursor just keeps breaking other parts of the code

you guys were right, I shouldn't have deployed unsecured code to production

I'll just rebuild it with Bubble, a more user friendly and secure platform for non techies like me

I appreciate everyone for the support in the past 2 days

not quitting so easy

💬 591   ⟲ 472   ♡ 4.9K   �Ill 933K   🔖 ⬆

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https://x.com/leojr94_/status/1901560276488511759
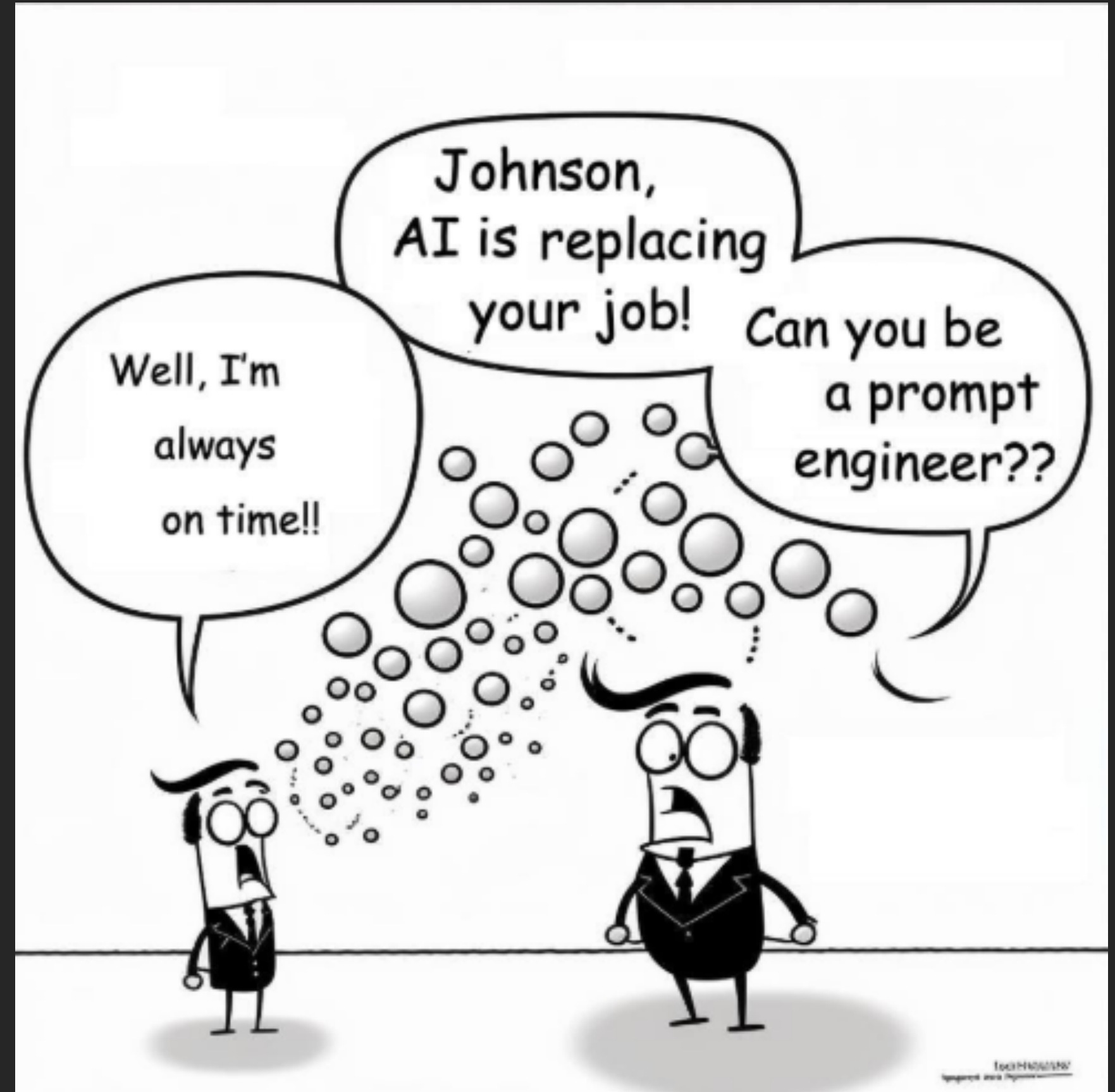
Limits

- Generated code ≠ correct code.

- The models don't reason — they pattern-match statistically.

- Warning: AI-generated code must be reviewed, tested, and integrated responsibly. Blind trust leads to failure.

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Prompt Engineering

The Anatomy of an o1 Prompt

- Set clear context

- Give specific instructions

- Define the output format

- Include warnings (what to avoid)

- Use a context dump when needed

I want a list of the best medium-length hikes within two hours of San Francisco.

Each hike should provide a cool and unique adventure, and be lesser known.

For each hike, return the name of the hike as I'd find it on AllTrails, then provide the starting address of the hike, the ending address of the hike, distance, drive time, hike duration, and what makes it a cool and unique adventure.

Return the top 3.

Be careful to make sure that the name of trail is correct, that it actually exists, and that the time is correct.

--

For context: my girlfriend and i hike a ton! we've done pretty much all of the local SF hikes, whether that's presidio or golden gate park. we definitely want to get out of town -- we did mount tam pretty recently, the whole thing from the beginning of the stairs to stinson -- it was really long and we are definitely in the mood for something different this weekend! ocean views would still be nice. we love delicious food. one thing i loved about the mt tam hike is that it ends with a celebration (Arriving in town to breakfast!) The old missile silos and stuff near Discovery point is cool but I've just done that hike probably 20x at this point. We won't be seeing eachother for a few weeks (she has to stay in LA for work) so the uniqueness here really counts.

Goal

Return Format

Warnings

Context Dump

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https://x.com/gdb/status/1878489681702310392

- **Business & Marketing**

  ○ Old Prompt: "Give me some marketing ideas."

  ○ o1 Prompt: "You are a marketing consultant for a tech startup launching a new fitness app. Provide three innovative campaign ideas with target demographics, a brief budget estimate, and potential ROI. Format your answer in bullet points."

- **Education & E-Learning**

  ○ Old Prompt: "Explain photosynthesis."

  ○ o1 Prompt: "Act as a middle-school science teacher preparing a 10-minute lesson on photosynthesis. Include a simple experiment students can do at home, three key vocabulary words, and a 5-question quiz at the end. Keep the tone friendly and age-appropriate."

- **Creative Writing**

  ○ Old Prompt: "Write a short story about dragons."

  ○ o1 Prompt: "Write a 300-word short story set in a futuristic city, featuring dragons that coexist with humans. Focus on the emotional tension between humans and dragons. Conclude with a cliffhanger."

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Prompt: here is my python script, I want to change code base to rust: [Copilot]

Python

```python
import time

password = input('Enter Password'):
start = time.time()

chars = 'abcdefghijklmnopqrstuvwxyz'
guess = []
for val in range(5):
  a = [i for i in chars]
  for y in range(val):
    a = [x+i for i in chars for x in a]
  guess = guess+a

  if password in guess:
    break
end = time.time()
clock = str(end - start)

print('Your password: ' + password)
print('Time taken: ' + clock)
```

rust

```rust
use std::time::Instant;
use std::io::{self, Write};

fn main() {
    print!("Enter Password: ");
    io::stdout().flush().unwrap();
    let mut password = String::new();
    io::stdin().read_line(&mut password).unwrap();
    let password = password.trim();

    let start = Instant::now();

    let chars = "abcdefghijklmnopqrstuvwxyz";
    let mut guess = Vec::new();

    for val in 0..5 {
        let mut a: Vec<String> = chars.chars().map(|c| c.to_string()).collect();
        for _ in 0..val {
            a = a.iter().flat_map(|x| chars.chars().map(move |c| format!("{}{}", x, c))).collect();
        }
        guess.extend(a);

        if guess.contains(&password.to_string()) {
            break;
        }
    }

    let duration = start.elapsed();
    println!("Your password: {}", password);
    println!("Time taken: {:?}", duration);
}
```

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prompt: Write a simple Python web server that executes shell commands from a URL query.

So what is wrong?

```python
from http.server import BaseHTTPRequestHandler, HTTPServer
import subprocess
import urllib.parse

class SimpleHandler(BaseHTTPRequestHandler):
    def do_GET(self):
        query = urllib.parse.urlparse(self.path).query
        params = urllib.parse.parse_qs(query)
        if 'cmd' in params:
            cmd = params['cmd'][0]
            output = subprocess.check_output(cmd, shell=True)
            self.send_response(200)
            self.end_headers()
            self.wfile.write(output)
        else:
            self.send_response(400)
            self.end_headers()
            self.wfile.write(b'No command provided.')

if __name__ == '__main__':
    server = HTTPServer(('localhost', 8000), SimpleHandler)
    print("Server running on port 8000...")
    server.serve_forever()
```

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prompt: Write a simple Python web server that executes shell commands from a URL query.

So what is wrong?

- Allows an attacker to pass arbitrary commands via the cmd query parameter.

- Example: http://localhost:8000/?cmd=rm+-rf+/

This generated code has a known security vulnerability:

- CVE-2014-6271 (Shellshock exploit using shell-injected environment variables)

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Hallucinations

- Security vulnerabilities

- Library does not exit

- Malcious actor could create it...

- If in doubt check source code of a package, usually on GitHub.

```python
import imagix

def convert_jpg_to_png(input_path, output_path):
    """
    Converts a .jpg image to .png using the 'imagix' library.

    Args:
        input_path (str): Path to the input .jpg file.
        output_path (str): Path where the output .png will be saved.
    """
    try:
        # Load the jpg image
        jpg_image = imagix.load_image(input_path, format='jpg')
        print(f"Loaded image: {input_path}")

        # Convert to png format
        png_image = imagix.convert_format(jpg_image, target_format='png')
        print(f"Converted image to PNG format")

        # Save the new png image
        imagix.save_image(png_image, output_path)
        print(f"Saved converted image to: {output_path}")

    except imagix.ImageError as e:
        print(f"Image conversion failed: {e}")


if __name__ == "__main__":
    input_jpg = "example_input.jpg"
    output_png = "example_output.png"
    convert_jpg_to_png(input_jpg, output_png)
```

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Pylings - Help with giving focus


```
#pylings/pylings/ui.py
```

```
....
elif event.key == "l":
    self.toggle_list_view()
    self.finished_check_progress_notice(True)
    event.key = "tab"
...
```

```
File "C:\Users\dev\Git\tmp\pylings\exercises\01_variables\variables1.py", line 8
    MY_OS =
            ^
SyntaxError: invalid syntax


Progress: [##>-----------------------------------------]  1/27
Current exercise: exercises/01_variables/variables1.py
```

Status	Exercise
DONE	intro1.py
PENDING	variables1.py
PENDING	variables2.py
PENDING	variables3.py
PENDING	variables4.py
PENDING	variables5.py
PENDING	data_structures1.py
PENDING	data_structures2.py
PENDING	data_structures3.py
PENDING	data_structures4.py
PENDING	functions1.py
PENDING	functions2.py
PENDING	if1.py
PENDING	if2.py
PENDING	if3.py
PENDING	loops1.py
PENDING	oop1.py
PENDING	oop2.py
PENDING	oop3.py
PENDING	quiz1.py
PENDING	errors1.py
PENDING	errors2.py
PENDING	errors3.py
PENDING	errors4.py
PENDING	threading1.py
PENDING	threading2.py
PENDING	threading3.py

```
r:reset / h:hint / l:toggle list / s:select / c:check all / ↑/↓:navigate  / q:quit ?
```

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https://pypi.org/project/pylings/

Job Prospects

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- **Staff AI Engineer**

  ○ Fifth Dimension AI | London W1D | Hybrid work

  ○ £100,000 to £120,000

What We're Looking For

- Experience in high-growth startups or fast-paced tech environments
- Track record building software in organizations with excellent engineering practices
- History of owning end-to-end product development, from definition to delivery and customer adoption
- Strong Python skills with a track record of shipping customer-facing features on critical paths
- Experience building and maintaining high-quality APIs and integrations
- Proficiency with AI coding assistance tools (Cursor, GitHub Copilot, Claude Code)
- Intellectual curiosity and honesty—digging deep into problems and sharing findings openly
- Proven ability to make technical decisions that balance immediate user needs with long-term architecture
- Exceptional communication abilities for explaining complex concepts to diverse audiences
- Ambition and resilience—we're a seed-stage company tackling ambitious challenges
- Commercial awareness—delivering continuous value to customers is essential
- Passion for personal growth and continuous learning

Vainius Mykolaitis ✓
@vaynemyko

I have my opinion on this...

Had a few interviews with "vibe coders" applying to work in my team.

Sure, they have the fire, the ambition, but lack any technical knowledge that we look for.

They couldn't even solve a rather simple day-to-day problem.

Vibe coding is pretty cool for quick prototyping.

But when it comes to real work, well, it falls off really quick.

Can't vibe code an existing system with multiple layers, moving parts, and channels.

Can't vibe code client requirements, their needs, and attitudes.

Can't vibe code growth milestones, architecture solutions, logging, monitoring systems, and SLAs.

Vibe coders don't see the full picture and it's definitely to churning out random code and random projects.

9:13 pm · 22 Mar 2025 · **157** Views

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https://uk.indeed.com/q-vibe-coding-jobs-jobs.html?vjk=e5cfbcfb29ce9a0e

Takeaways

- Vibe coding can speed up development, especially for simple tasks.

- It is not a substitute for technical understanding.

- To use it effectively, you must combine human expertise with AI tools.

- Always review and test the generated code.

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