



Vibe coding

Vibe coding is an artificial intelligence-assisted software development style popularized by Andrej Karpathy in early 2025.^[1] It describes a fast, improvisational, collaborative approach to creating software where the developer and a large language model (LLM) tuned for coding are acting rather like pair programmers in a conversational loop. Unlike traditional AI-assisted coding or prompt engineering, vibe coding emphasizes staying in a creative flow: the human developer avoids micromanaging the code, accepts AI-suggested completions liberally, and focuses more on iterative experimentation than code correctness or structure.

Karpathy described it as "fully giving in to the vibes, embracing exponentials, and forgetting that the code even exists." He used the method to build prototypes like MenuGen, letting LLMs generate all code, while he provided goals, examples, and feedback via natural language instructions.^[2] The programmer shifts from manual coding to guiding, testing, and giving feedback about the AI-generated source code.^{[3][4][5]}

Advocates of vibe coding say that it allows even amateur programmers to produce software without the extensive training and skills required for software engineering.^[6] Critics point out a lack of accountability and increased risk of introducing security vulnerabilities in the resulting software. The term was introduced by Andrej Karpathy in February 2025^{[4][6][3]} and listed in the Merriam-Webster Dictionary the following month as a "slang & trending" term.^[7]

Definition

Computer scientist Andrej Karpathy, a co-founder of OpenAI and former AI leader at Tesla, introduced the term *vibe coding* in February 2025. The concept refers to a coding approach that relies on LLMs, allowing programmers to generate working code by providing natural language descriptions rather than manually writing it.^{[3][4][6]}

Karpathy described his approach as conversational, using voice commands while AI generates the actual code. "It's not really coding - I just see things, say things, run things, and copy-paste things, and it mostly works."^[6] Karpathy acknowledged that vibe coding has limitations, noting that AI tools are not always able to fix or understand bugs, requiring him to experiment with unrelated changes until the problems are resolved.^[4] He concluded that he found the technique "not too bad for throwaway weekend projects" and described it as "quite amusing".

The concept of vibe coding elaborates on Karpathy's claim from 2023 that "the hottest new programming language is English", meaning that the capabilities of LLMs were such that humans would no longer need to learn specific programming languages to command computers.^[8]

A key part of the definition of vibe coding is that the user accepts code without full understanding.^[3] Programmer Simon Willison said: "If an LLM wrote every line of your code, but you've reviewed, tested, and understood it all, that's not vibe coding in my book—that's using an LLM as a typing assistant."^[3]

Reception and use

In February 2025, *New York Times* journalist Kevin Roose, who is not a professional coder, experimented with vibe coding to create several small-scale applications. He described these as "software for one", referring to personalised AI-generated tools designed to address specific individual needs, such as an app that analyzed his fridge contents to suggest items for a packed lunch. Roose noted that while vibe coding enables non-programmers to generate functional software, the results are often limited and prone to errors.^{[5][8]}

In one case, the AI-generated code fabricated fake reviews for an e-commerce site. He also observed that AI-assisted coding enables individuals to develop software that previously required an engineering team. In response to Roose, cognitive scientist Gary Marcus said that the algorithm that generated Roose's LunchBox Buddy app had presumably been trained on existing code for similar tasks. Marcus said that Roose's enthusiasm stemmed from reproduction, not originality.^{[8][5]}

In March 2025, *Y Combinator* reported that 25% of startup companies in its Winter 2025 batch had codebases that were 95% AI-generated, reflecting a shift toward AI-assisted development within newer startups.^[9]

Three engineers interviewed by *IEEE Spectrum* agreed that vibe coding is a way for programmers to learn languages and technologies they are not yet familiar with.^[10]

Inspired by "vibe coding", *The Economist* suggested the term "vibe valuation" to describe the very large valuations of AI startups by venture capital firms that ignore accepted metrics such as Annual Recurring Revenue.^[11]

In July 2025, *The Wall Street Journal* reported that vibe coding was being adopted by professional software engineers and had begun to enter commercial use cases.^[12]

Limitations

Mischaracterization of software development

Andrew Ng has taken issue with the term, saying that it misleads people into assuming that software engineers just "go with the vibes" when using AI tools to create applications.^[13]

Quality of code and security issues

Vibe coding has raised concerns about understanding and accountability. Developers may use AI-generated code without fully comprehending its functionality, leading to undetected bugs, errors, or security vulnerabilities. While this approach may be suitable for prototyping or "throwaway weekend projects" as Karpathy originally envisioned, it is considered by some experts to pose risks in professional settings, where a deep understanding of the code is crucial for debugging, maintenance, and security. *Ars Technica* cites Simon Willison, who stated: "Vibe coding your way

to a production codebase is clearly risky. Most of the work we do as software engineers involves evolving existing systems, where the quality and understandability of the underlying code is crucial."^[3]

Task complexity

Generative AI is highly capable of handling simple tasks like basic algorithms. However, such systems struggle with more novel, complex coding problems like projects involving multiple files, poorly documented libraries, or critical code that has real-world impacts.^[14]

Challenges with debugging

LLMs generate code dynamically, and the structure of such code may be subject to variation. In addition, since the developer did not write the code, they may struggle to understand syntax/concepts that they themselves have not used.^[14]

See also

- No-code development platform

References

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5. Roose, Kevin (February 27, 2025), "Not a Coder? With A.I., Just Having an Idea Can Be Enough." (<https://www.nytimes.com/2025/02/27/technology/personaltech/vibecoding-ai-software-programming.html>), *The New York Times*, ISSN 0362-4331 (<https://search.worldcat.org/issn/0362-4331>), archived (<https://web.archive.org/web/20250303174203/https://www.nytimes.com/2025/02/27/technology/personaltech/vibecoding-ai-software-programming.html>) from the original on March 3, 2025, retrieved June 3, 2025, "Vibecoding, a term that was popularized by the A.I. researcher Andrej Karpathy, is useful shorthand for the way that today's A.I. tools allow even nontechnical hobbyists to build fully functioning apps and websites, just by typing prompts into a text box. You don't have to know how to code to vibecode — just having an idea, and a little patience, is usually enough. "It's not really coding," Mr. Karpathy wrote this month. "I just see stuff, say stuff, run stuff, and copy paste stuff, and it mostly works." "
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External links

- Vibe coding subreddit (<https://www.reddit.com/r/vibecoding/>), a community for vibe coding practitioners^[1]

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