

VIBE Coding, A threat or Opportunity?"

A new approach where developers use LLMs to generate code from natural language descriptions



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Quick View AI Term

Feature	Artificial Intelligence (AI)	Generative AI (GenAI)	Agentic AI
Scope	Broadest field; encompasses all intelligent machine capabilities	Subset of AI; focused on content creation	Subset of AI; focused on autonomous action and goal achievement
Primary Purpose	Enable machines to simulate human intelligence	Create new, original content (text, images, audio, etc.)	Perform multi-step tasks autonomously, make decisions, and act in an environment
Nature	General intelligence simulation, learning, reasoning	Content production, pattern replication, creativity	Goal-driven, autonomous, interactive, iterative planning
Interaction	Varies greatly (e.g., analysis, prediction, response)	Output-driven; typically responds to prompts/instructions	Acts independently in an environment; may involve human oversight/guidance
Role	The "brain" or intelligence behind systems	The "creator" or "artist" of new data/content	The "doer" or "executor" that plans and carries out tasks
Dependency	Can utilize various techniques (ML, DL, GenAI)	Often relies on deep learning (e.g., LLMs, GANs)	Often leverages GenAI for reasoning/planning, and external tools for action

What is Vibe Coding?



Natural Language Input

Describe desired outcome in plain language



The term was coined by Andrej Karpathy (a co-founder of OpenAI and former AI leader at Tesla) in February 2025.



Iterative Refinement

Conversational process to improve code



Outcome Over Implementation

Focus on functionality, AI handles details



An illustration on the left side of the slide shows two people, a man and a woman, in a digital workspace. The man is on the left, wearing a blue long-sleeved shirt and dark pants, holding a tablet. The woman is on the right, wearing a blue long-sleeved shirt and dark pants, holding a smartphone. They are standing in front of a large, dark blue background filled with glowing, semi-transparent rectangular panels. Each panel contains various digital elements like icons, charts, and text, suggesting a complex software development or design environment. The overall color palette is dark blue and teal.

Key Benefits

Democratized Development

Lower barrier to entry for non-technical users

Rapid Prototyping

Accelerates development process for MVPs

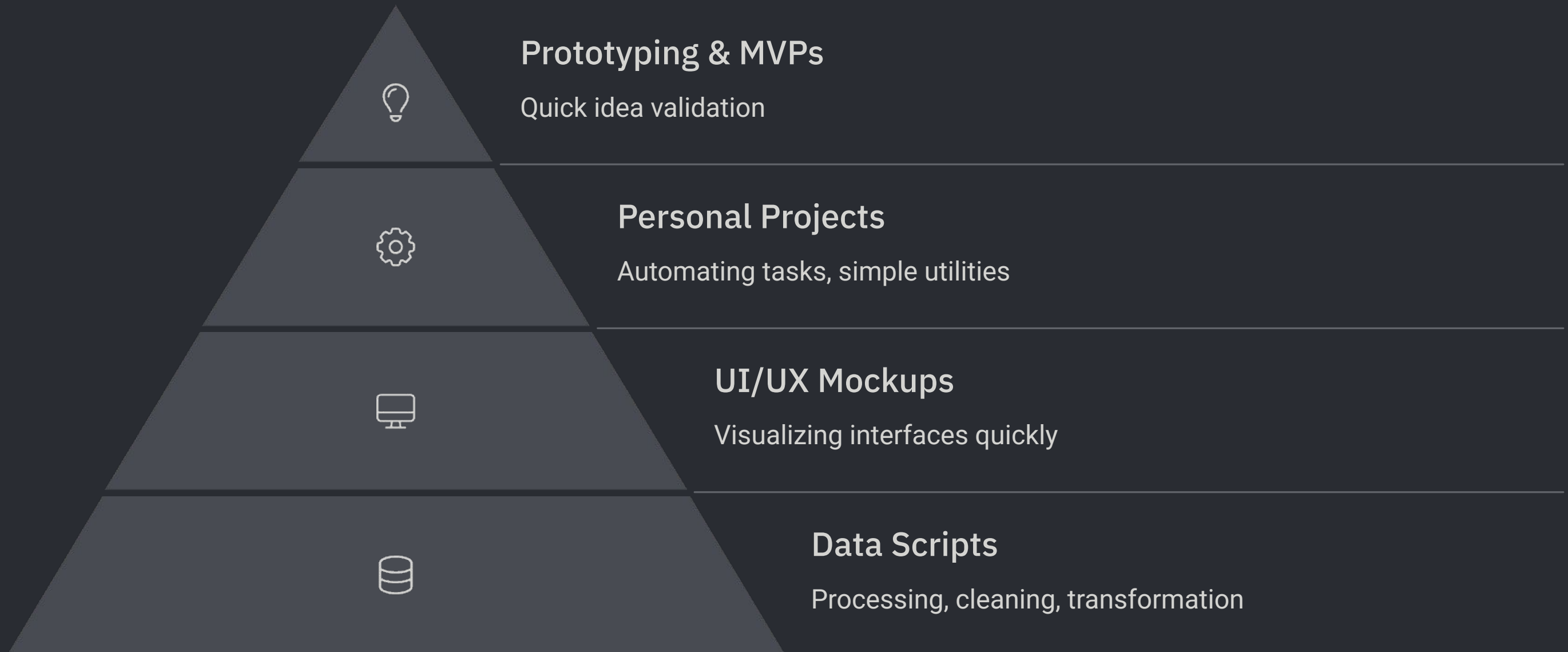
Automates Repetitive Tasks

Handles boilerplate code and routine work

Enhanced Creativity

Developers stay in flow state, focus on ideas

When to Use Vibe Coding



Limitations & Considerations

Code Quality

May not be optimized or follow best practices



Debugging Challenges

Harder to fix issues in unfamiliar code

Complex Projects

Less suitable for sophisticated systems



Security Risks

Potential for undetected vulnerabilities

Impact on Developers



From Coder to Orchestrator

Guide AI, review output, ensure system integrity



Focus on Higher-Level Problems

Architecture, innovation, human elements



Prompt Engineering Skills

Craft effective prompts for desired outcomes



Enhanced Debugging

Analyze AI-generated code for issues

Managing Technical Debt

Establish Clear Guidelines

Define standards and architecture upfront

Implement Review Processes

Mandatory code reviews and security audits

Leverage AI Tools

Use AI-powered analysis and testing

Regular Refactoring

Treat AI code as starting point, not final product



Testing & Deployment Challenges



Testing Blind Spots

Minimal test generation, brittle tests



Security Vulnerabilities

Unvetted code, hardcoded secrets



Integration Issues

Compatibility problems with existing systems



Performance Concerns

Suboptimal code, scalability limitations

LIVE DEMO

MKAP AI-Driven Development Cycle

