



abstract operators



github.com/abstractoperators/concrete



hello@abstractoperators.ai

open source ai agent orchestration | kubernetes for ai agents



thesis

many startups exist for developing single-purpose ai agents but there is an opportunity to develop the best-in-class platform for orchestrating ensembles of ai agents for heterogeneous use cases

ai agents in ensembles can produce results

- **more accurately,**
- **with greater complexity,**
- **with better interpretability,**
- **and with more intuitive safety controls**

than any “super” agent working alone

Sources: Park, et al.; Qian, et al.; Li, et al.; OpenAI



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generative ai adoption is inevitable

“Gen AI enterprise use cases could yield **\$2.6 trillion** to **\$4.4 trillion** annually in value across more than 60 use cases”

“**60 to 70 percent** of the work hours in today’s global economy could theoretically be automated”

- McKinsey & Company

LAST UPDATED AUGUST 7, 2024 IN AI INSIGHTS & ANALYSIS

**Soon, Software Engineering
Would be All About Managing
AI Coding Agents**

There has never been a better or more productive time to be a builder than now.

- Analytics India Magazine



gen ai market projections

\$36B

Projected size of the
Generative AI Market in
2024

46.5%

CAGR

For a market volume of
\$356B in 2030

Source: Statista

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developers see the potential but need better accuracy and reliability

- **64%** of developers feel neutral or worse that AI is capable of handling complex tasks
- **66.2%** of developers don't trust the output or answers from AI
- **63.2%** of developers feels that AI lacks context of codebase, internal architecture and/or company knowledge
- Only **2.7%** of developers highly trust the accuracy of AI tools

...yet **81%** of Developers believe AI can increase their productivity

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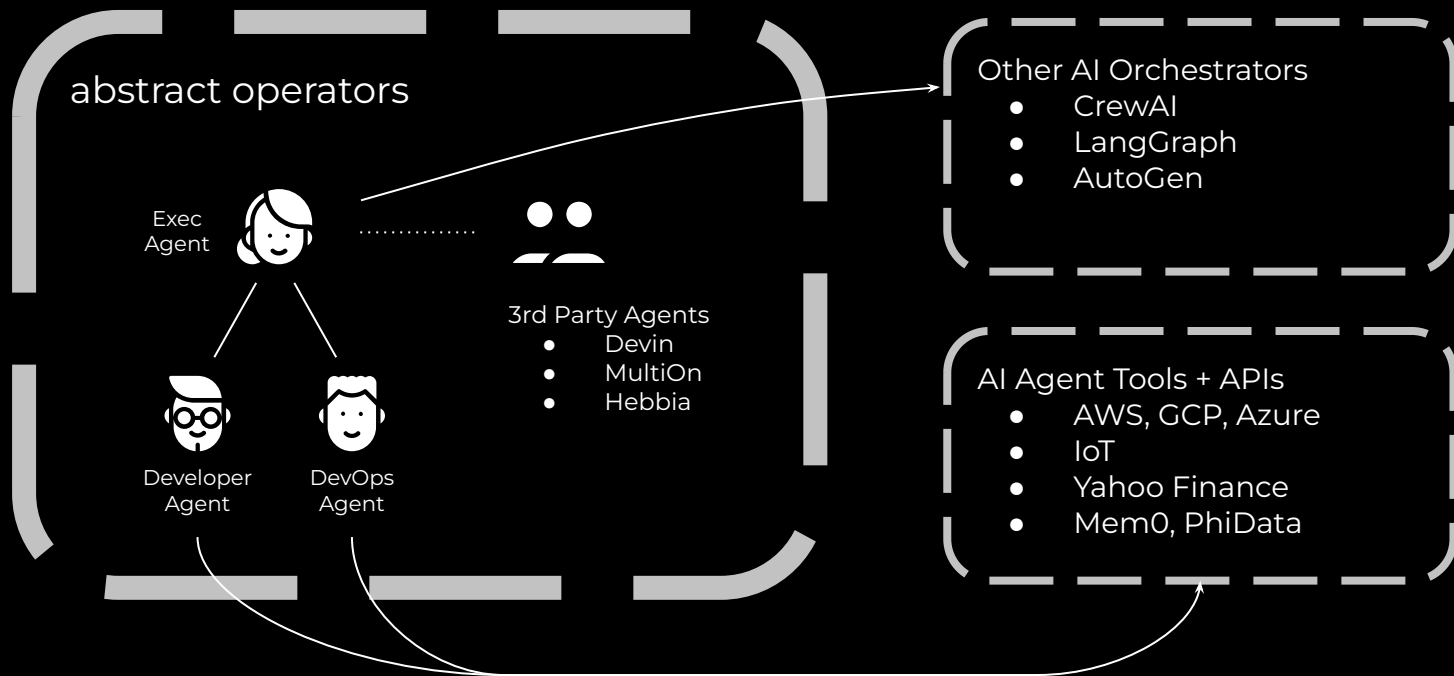
ai agent orchestration capabilities with incumbents are feeble or non-existent

	OpenAI Assistants	Anthropic Messages	Abstract Operators
Context Management			
Tool Use			
Multi-Agent Coordination			

Source: OpenAI, Anthropic

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abstract operators can leverage third party agents and orchestration tools



**prior startup experience, applied research techniques,
and extreme empathy for users will keep us competitive**



Founder has 4+ years of experience working at seed stage startups of <10 people



We apply cutting edge research techniques like communicative dehallucination from ChatDev (Qian, et al.)



We prioritize user experience and ease of adoption

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demo: wix-like website builder

The website generation and the generated website modifications are powered by AI agent ensembles

Welcome to the Landing Page

Generated Subpages

- [create colorful draggable tiles using bootstrap](#)
- [create a todo list where elements can be added, crossed off, or removed](#)

Subpage for create a todo list where elements can be added, crossed off, or removed

Todo List

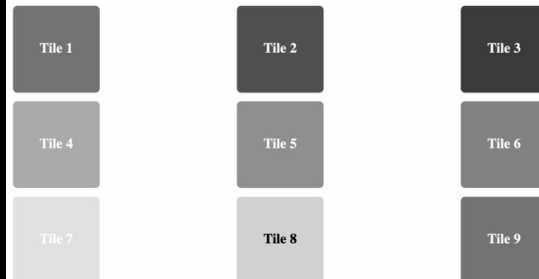
Add Todo:

- yeet
- cook
- party

[Back to Landing Page](#)

Subpage for create colorful draggable tiles using bootstrap

Colorful Draggable Tiles



[Back to Landing Page](#)

there's still so much more we'd like to add



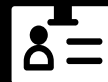
Governance Framework

- Allocate resources
 - Compute
 - Purchasing authority
- Grant and revoke permissions



Self Setup

- Generates and implements use cases for itself
- Self-improving



More Agents



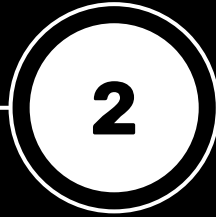
More Ensembles

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business strategy



Gain traction
and users by
being open
source



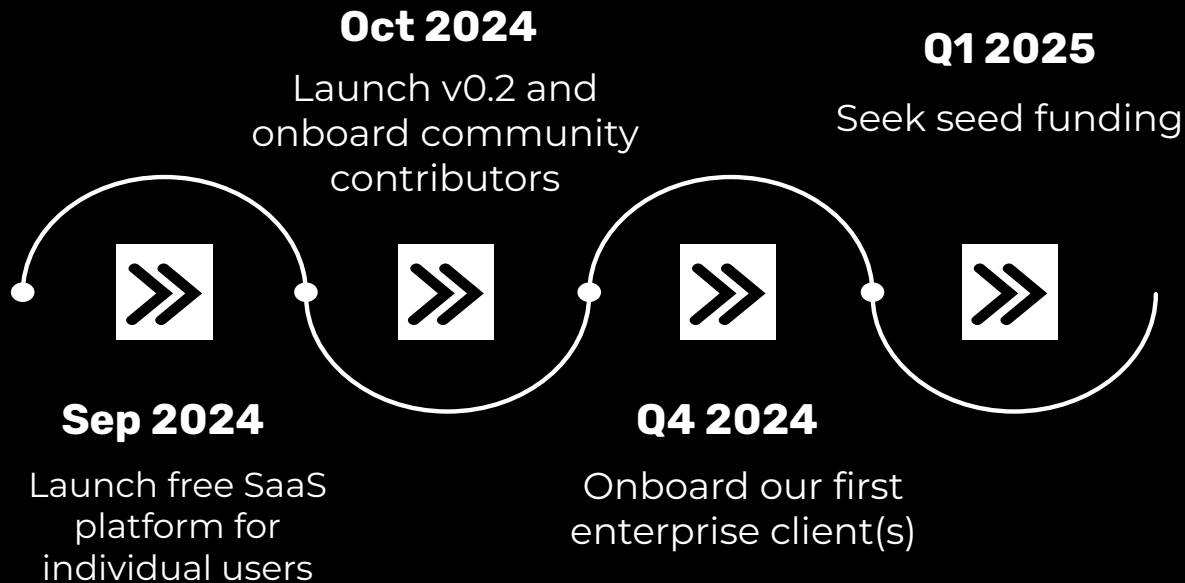
Incorporate
feedback and
generate sales
leads



Target startup
founders and
chief innovation
officers for initial
B2B deployments

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roadmap





about the founder: kent gang

- 2x Early Employee at Venture-Backed Startups
 - Employee #4 at Alkymi
 - AI powered document processing
 - Built out several core systems as Sr BE engineer
 - Alkymi raised a \$21 million series A in Oct 2022
 - Employee #5 at Stride Labs
 - Liquid staking in the cosmos blockchain ecosystem
 - Platform engineer and kubernetes wrangler
 - Saw TVL growth from \$21M to >\$70M
- Turned down two Founding Engineer offers in generative AI to start Abstract Operators
- Venture Capital Fellow with Iron Key Capital
- Engineering Physics Major
 - Graduated in 3 years

Sources: Crunchbase, DefiLlama



your funding and support will go towards..



Team Backpay
& Laptops



Market Research Surveys
& User Interviews



Hiring Another Engineer
& Product Manager



Cloud Compute
& Developer Tools

..thanks!



selected bibliography

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<https://www.mckinsey.com/capabilities/mckinsey-digital/our-insights/why-agents-are-the-next-frontier-of-generative-ai>
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