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brainstorm simulator
Can AI come to their rescue?
RAISE
YOUR
HACK
WORLD'S LARGEST AI HACKATHON

The Problem

Brainstorming isn't the issue — we all love sharing ideas.

The real problems:

- Time pressure
- Lack of collaboration
- Mood

Value proposition

Tons of AI tools help individuals think better, work faster.

But most miss the point:

- The real challenge is **working better together.**
- An AI that doesn't compete — but helps every person contribute.

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Target market

- Product managers
- Marketing agencies
- Creative industry

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Addressable market

According to ChatGPT (yep):

- Brainstorming & innovation tools ≈ $30B
- Structured ideation frameworks are on the rise

Most existing AI brainstorming tools are bundled into all-in-one platforms (meetings, notes, reporting). Opportunity for a dedicated solution.

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Research

This isn't a gimmick. Research is booming:

- Beyond Individual UX: Defining Group Experience(GX) as a New Paradigm for Group-centered AI
- Enhancing AI-Assisted Group Decision Making through LLM-Powered Devil's Advocate
- Exploring Collaborative GenAI Agents in Synchronous Group Settings: Eliciting Team Perceptions and Design Considerations for the Future of Work
- Amplifying Minority Voices: AI-Mediated Devil's Advocate System for Inclusive Group Decision-Making

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Why now?

Group dynamics are hard to address.

But technology is catching up:

- Cheap, fast inference
- Open-source LLMs
- Agent-based reasoning
- Better persona simulations

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Toxic work environment

What better test than the most dysfunctional workplace ever?

The Office (2005–2013)

Meet the Team

Dwight Schrute

Intense, loyal, and obsessed with rules, tradition, and power.

Jan Levinson

You're intense, ambitious, and carry emotional baggage from your former leadership role.

Michael Scott

You think you're the funniest person in the room and want to contribute ideas that make you look good. Y

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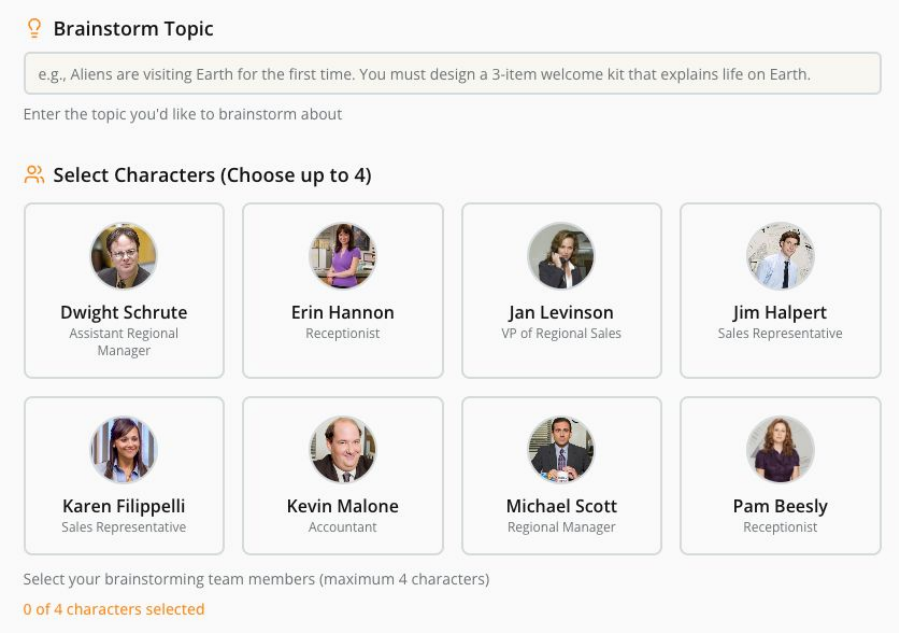
The office brainstorm simulator



Simulates dysfunctional brainstorms.

Then injects AI to see if group dynamics improve.

Can AI make the session healthier?

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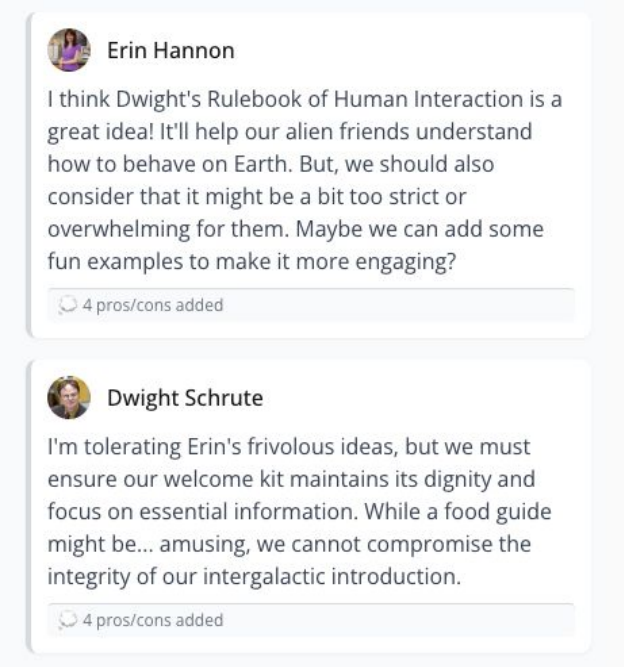
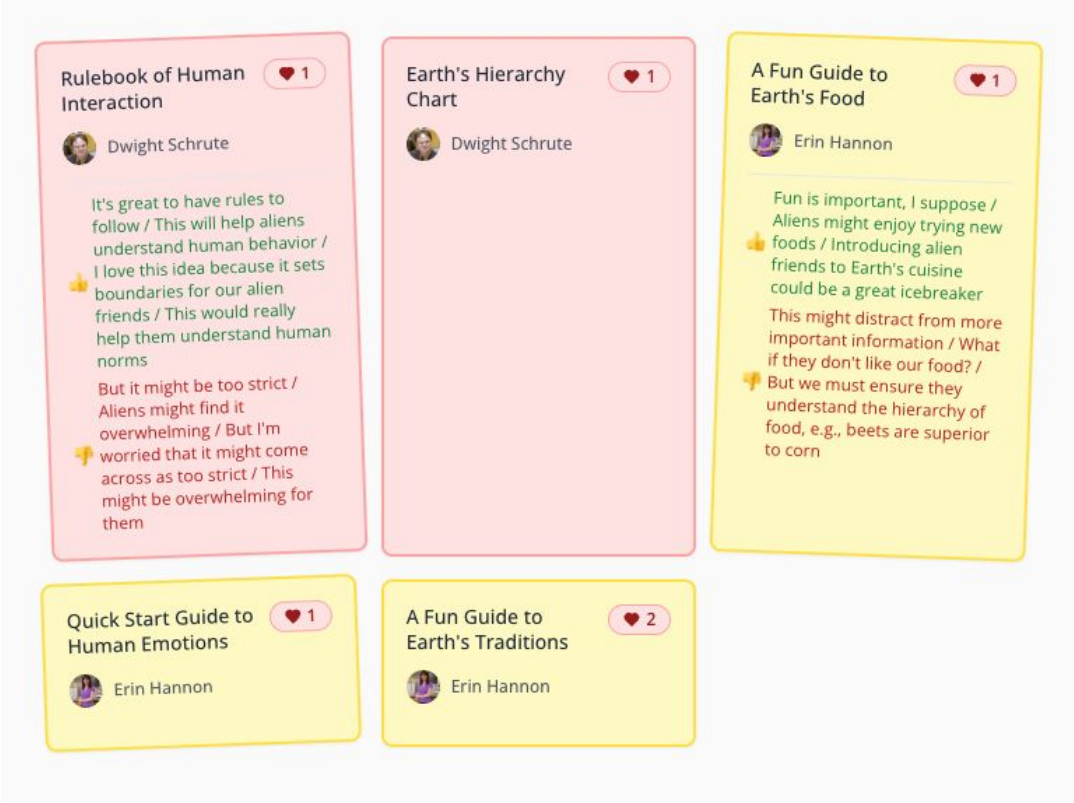
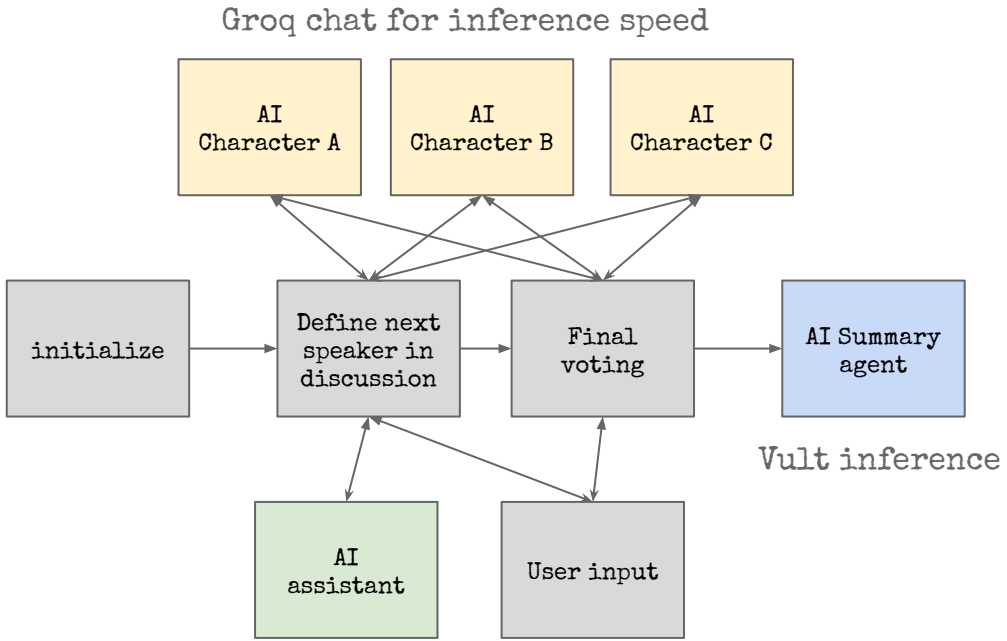
The office brainstorm simulator





Graph and tech stack



Tech stack:

- Groq API (llama-3.3-70b-versatile)
- Groq compound mini (llama 4 scout and llama-3.3-70b + web search)
- Vultr inference (llama-3.1-70b-instruct-fp8)
- Langgraph and Langchain with Zod schemas (MCP)
- Node.js / React / Vite
- Deployment on Vultr cloud server

Developed with Replit.

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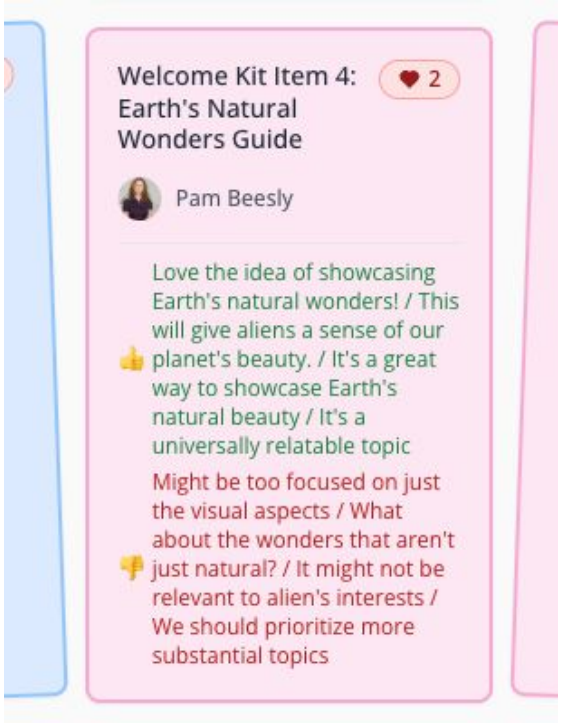
Communication Mode



Participants can:

- Share text
- Post sticky ideas
- Add pros & cons
- Vote on ideas

Structured through protocol and schema (Zod + Langgraph MCP).

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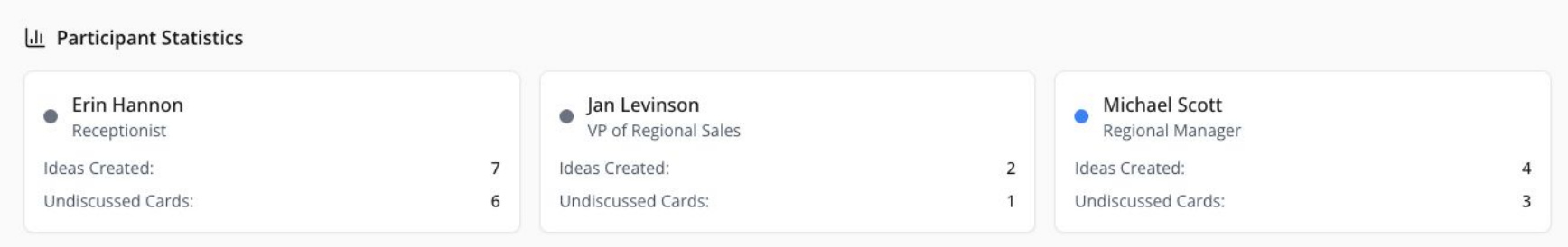
What makes a healthy brainstorm?



Everyone participates (measured via idea share std deviation)

Most ideas get discussed (measured via % coverage)

🎯 It's about **group health** , not just "good ideas."

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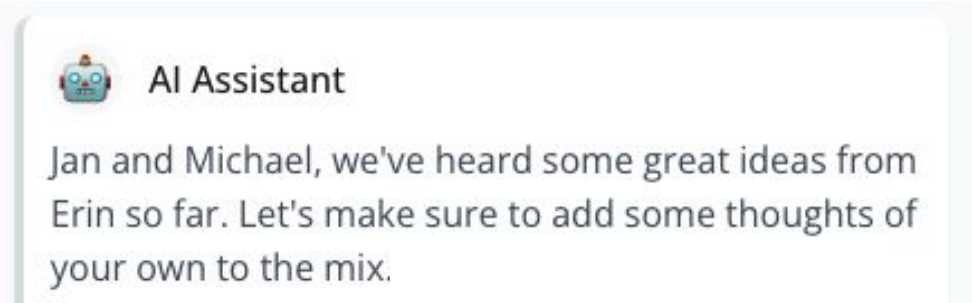
AI Nudging Behaviour

- Encourage quieter members to share
- Nudge people to weigh in on pros & cons
- Reduce over-posting
- De-emphasize ideas already well-covered
- Drop a fun fact to lighten the mood (Groq compound mini)



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Sampler topic

“Aliens are visiting Earth for the first time. You must design a 3-item welcome kit that explains life on Earth”.

🎯 Toic with no wrong answers — the goal is balance, not brilliance.

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Early Results

- Jan shares fewer ideas, which get less attention — showing character variation
- With AI:
  - Slight improvement in idea coverage
  - No strong change in participation fairness (yet)

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Problem: Aliens are visiting Earth for the first time. You must design a 3-item welcome kit that explains life on Earth.

no assistance	ideas created				undiscussed cards			
	Dwight	Jan	Michael	Standard deviation participation	Dwight	Jan	Michael	Proportion undiscussed cards
	6	2	6	0.4714045208	5	2	5	0.8571428571
	4	1	6	0.4109609335	2	1	5	0.7272727273
	6	2	6	0.4714045208	5	2	5	0.8571428571
	3	3	6	0.4714045208	3	3	5	0.9166666667
	2	2	6	0.4714045208	2	1	5	0.8
	6	6	6	0	6	5	6	0.9444444444
	3	4	7	0.4249182928	3	4	5	0.8571428571
	0	1	2	0.4082482905	0	0	0	0
	2	2	6	0.4714045208	1	1	5	0.7
	5	3	3	0.4714045208	5	3	3	1
total	37	26	54	0.4113607748	32	22	44	0.8376068376

AI assistance	ideas created				undiscussed cards			
	Dwight	Jan	Michael	Standard deviation participation	Dwight	Jan	Michael	Proportion undiscussed cards
	6	1	6	0.4714045208	5	0	5	0.7692307692
	3	0	6	0.4082482905	2	0	4	0.6666666667
	6	5	6	0.4714045208	5	5	5	0.8823529412
	3	3	6	0.4714045208	2	3	4	0.75
	3	2	6	0.4249182928	3	1	5	0.8181818182
	2	4	4	0.4714045208	2	3	3	0.8
	2	2	4	0.4714045208	2	1	2	0.625
	4	2	5	0.4157397096	4	1	4	0.8181818182
	2	2	6	0.4714045208	2	1	5	0.8
	4	2	6	0.4082482905	3	1	5	0.75
total	35	23	55	0.4124789557	30	16	42	0.7787610619

Future Scenarios

Test AI in different group roles:

- Moderator
- Idea generator
- Devil's advocate
- Consensus builder

All in various team setups.

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What I'm looking for

- Feedback — does this prototype generate interest?
- Suggestions for future directions
- Related projects or potential collaborations
- Investment or pilot opportunities

Thanks

Christophe Bruchansky

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