Background

Consuming AI

- Consumers (everyone)
- Business (all of them)

- Huge impact
- All aspects of human society

Building AI

- Very accessible
- “shake and bake” tech

- Large developer base
- Large number of applications

(**not** “winner take all”)

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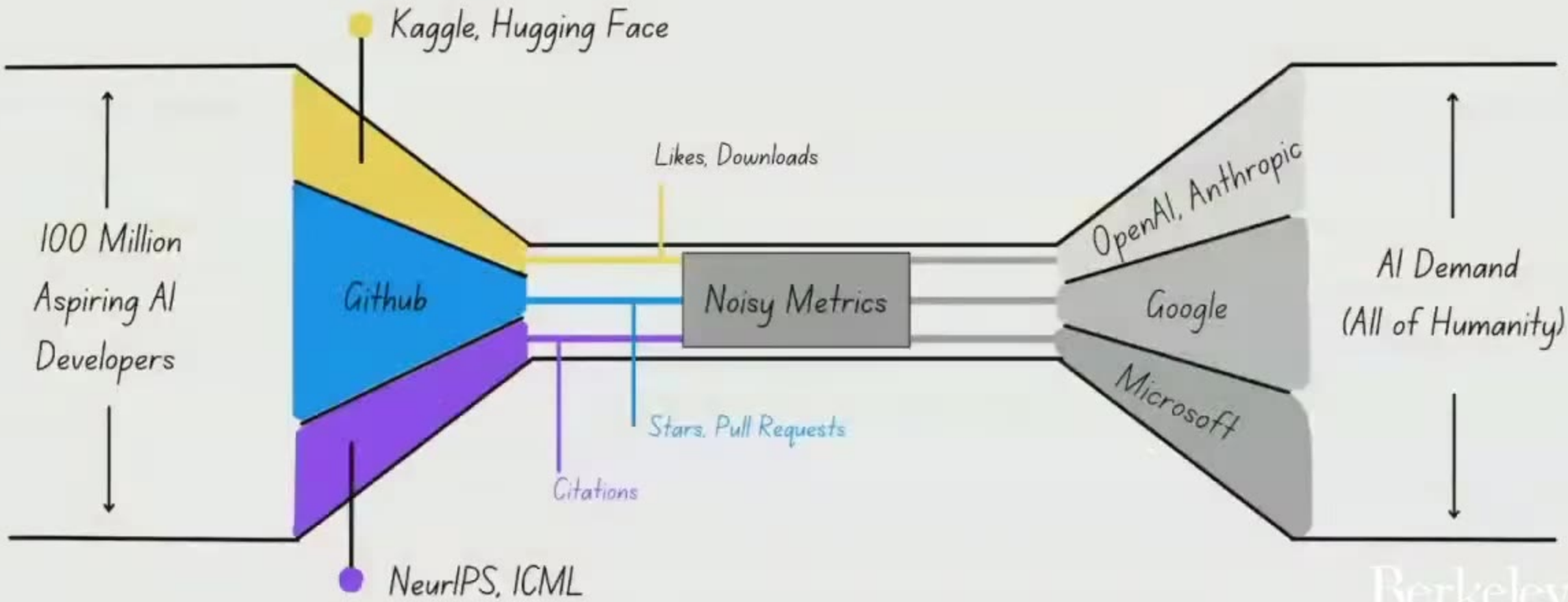
Motivation



Verizon Event ...
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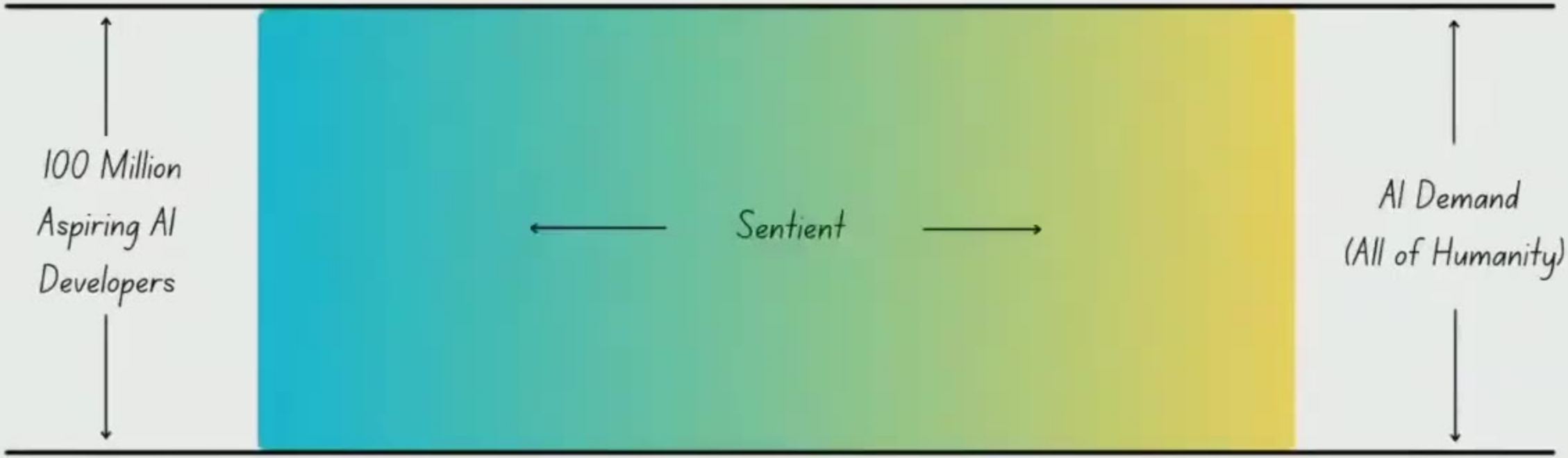
Endgame



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AI Services

Option A - Closed World

- Open AI
- Gemini
- Anthropic

- API access
- Paid portal
- No composability

Option B - Open World

- Llama
- Stable diffusion
- Mistral

- freely given away
- no monetization
- flexibility for downstream use

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(Actually) Open AI Flow

AI Flow	*Open?*	*AI-native proofs*
Data collection	Yes	Proof of contribution (e.g. HFRL)
Model training	**No**	Proof of training
Model hosting	**No**	Proof of fidelity
Model inference	**No**	Proof of inference
Model alignment	Yes	**Loyalty**
Model economics	Yes	**Monetization**

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Monetization

share the model openly, but **owner can track usage and economic value**

Digital rights management for AI

Analogous to licensing software

But for “open” software (no obfuscation)

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Loyalty

share the model widely, but not “useful” without a signed input

Decoupling AI development from Alignment

respect owner’s ethical, communal, safety values

allow each owner to set and enforce their own “constitution”

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Community built AI

Open, Monetizable, Loyal

Open: allows builders to improve from one another's innovation

Monetizable: incentive compatibility, AI entrepreneurship

Loyalty: safe, aligned, ethical usage

OML: new cryptographic primitive

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Cryptographic view

Indistinguishability obfuscation

classical goal; long standing, “crypto-complete” challenge

would resolve OML

incomplete theoretical understanding; far from practical

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AI-native cryptography

Cryptography

discrete (digital) data, every bit critical (hiding/verification/recovery)

AI data

continuous (e.g., embeddings)

differential geometry (e.g., low dimensional manifolds)

approximate behavior (e.g., average performance metrics, close by output)

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Using AI itself to build OML

Precedent: AI methods to invent new codes (e.g., KO codes)

Thursday 4-7pm, Open AGI Symposium, Columbia University

openagi.xyz/symposium

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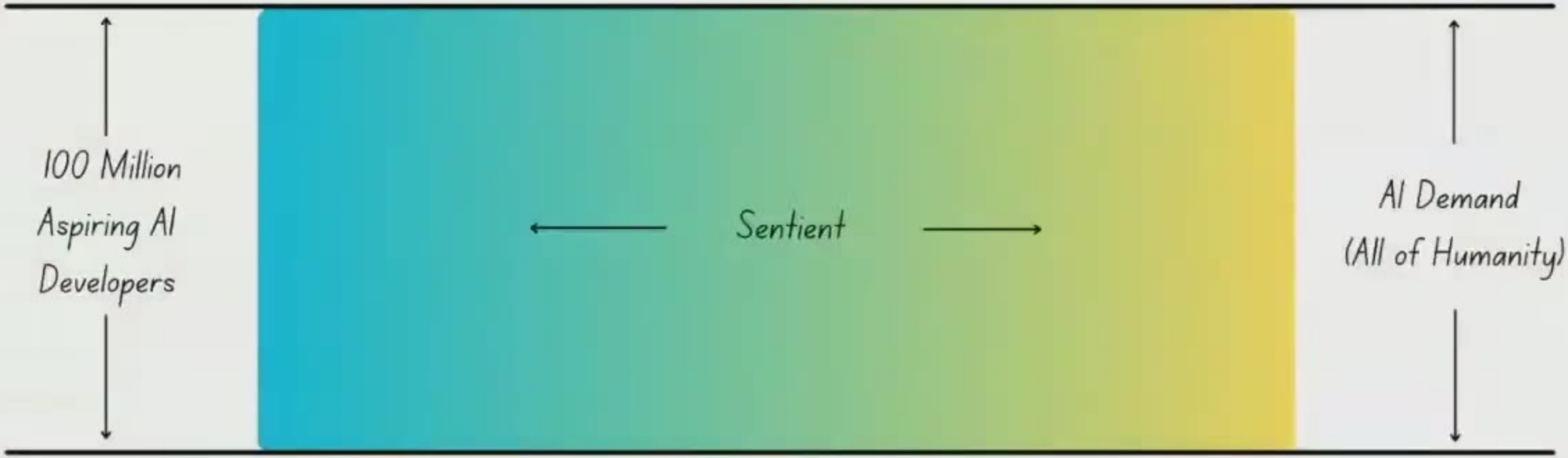

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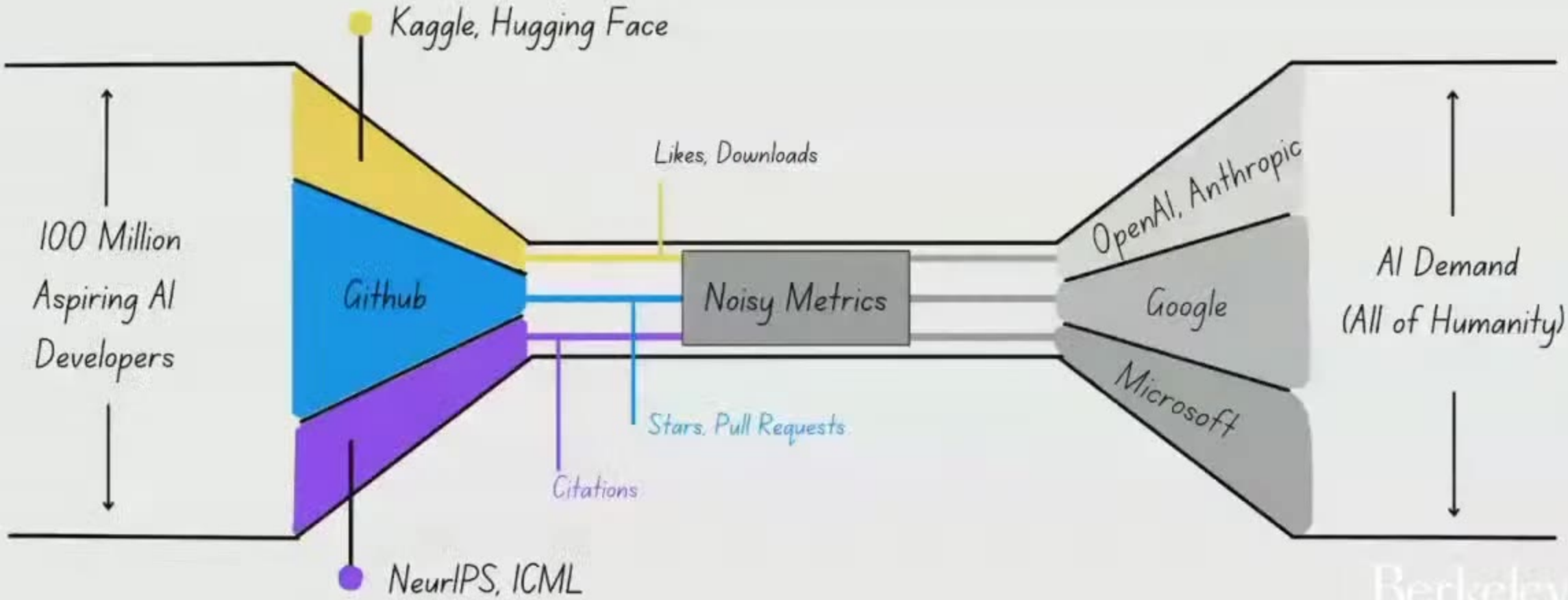

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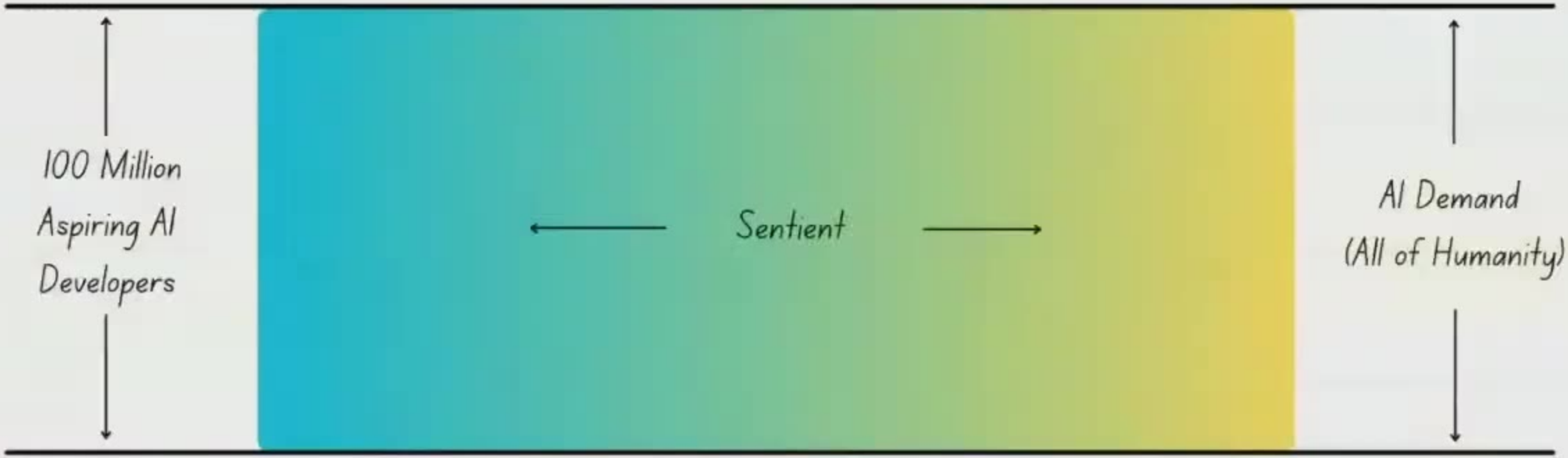

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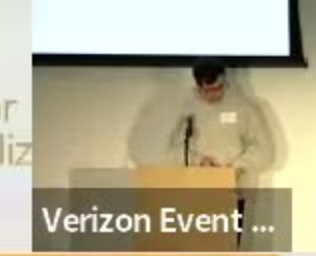

Session III: Foundations of Decentralized AI (II)

Decentralized AI Ecosystem

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Research Engineer
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