Decentralizing AI

Towards a More Equitable, Safe and Transparent Future

Decentralization Research Center

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About Decentralization Research Center

The Decentralization Research Center (DRC) is a 501(c)(4) social welfare non-profit that advocates for decentralization as a fundamental characteristic of emerging technologies. This includes the development of blockchain protocols and applications that are immutable, censorship resistant, transparent, secure, and enable data self-sovereignty.

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Introduction

Artificial Intelligence is increasingly shaping every aspect of our society and economy. From personalized healthcare and advanced financial modeling to autonomous transportation and intelligent social media platforms, AI's transformative potential is profound and far-reaching. As these technologies become ubiquitous and increasingly integrated into our lives, they bring significant challenges related to control, accountability, and equitable distribution of benefits and governance. Historically, major technological innovations have tended to concentrate economic power and influence within a limited set of stakeholders. This historical concentration — and the negative externalities it produced, from wealth inequality to minimal public oversight — should serve as a clear warning. As we stand on the threshold of an AI-driven future, we must recognize that this technology could far surpass prior innovations in its influence on society. This makes the case for decentralization in AI even more urgent - to ensure a balanced distribution of power, enhanced accountability, and equitable societal impacts.

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The Societal and Economic Importance of AI

AI is rapidly becoming an essential component of society, already influencing numerous industries including healthcare, finance, manufacturing, transportation, and entertainment. AI's capabilities to automate complex processes, optimize resource utilization, and generate insights from large datasets promise to significantly boost productivity and efficiency. Economically, AI is anticipated to drive substantial growth and competitiveness globally, becoming the backbone of economic advancement and innovation.

Beyond economic considerations, AI holds transformative societal implications. It has the potential to improve healthcare accessibility and outcomes through personalized medicine, increase financial inclusion by enabling better credit scoring and financial management tools, and enhance safety through intelligent transportation systems. However, whether these benefits are widely shared or narrowly concentrated depends heavily on how AI is governed. If a small

number of corporate entities control AI design, development and deployment, they could steer its outcomes in ways that primarily serve their own interests, potentially deepening inequality, limiting accountability, and introducing new risks to society at large.

Lessons from Past Innovation Waves

Throughout history, technological revolutions have profoundly reshaped society and economies, from the Industrial Revolution to the Digital Revolution. Each wave brought tremendous opportunities for growth but also resulted in the concentration of economic benefits among a relatively small group of corporations and individuals. For instance, the current digital economy is dominated by tech giants such as Apple, Microsoft, Amazon, Alphabet, Meta, and Nvidia, whose collective market capitalization exceeds $14 trillion, representing nearly a third of the U.S. stock market value. This economic power translates directly into influence, potentially enabling these entities to set industry standards, shape market dynamics, and influence policy outcomes significantly.

The immense wealth accrued by tech billionaires further illustrates how concentrated technological advancement has become. Figures like Jeff Bezos, Elon Musk, and Mark Zuckerberg exemplify a system wherein innovation disproportionately enriches a few, amplifying wealth inequality and potentially limiting broader societal benefits.

One particularly instructive case is the evolution of Facebook. Originally designed as an open platform, Facebook allowed developers to embed experiences inside the platform and access user data (with permission) through tools like the Social Graph API. Third-party applications could integrate Facebook identity and social data into external services, representing a quasi-open architecture. Over time, however, Facebook shifted toward a closed ecosystem that prioritized advertising revenue, data retention, and platform control. The platform's once-open infrastructure was gradually sealed off to preserve competitive advantage and centralize monetization — a stark example of how early openness can give way to enclosed corporate control.

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The Imperative for Decentralizing AI

The urgency for decentralizing AI arises from the profound risks associated with centralized control. Centralized AI platforms, governed by limited corporate interests, risk becoming opaque, unaccountable entities whose decisions could significantly impact societal fairness and economic distribution. The lack of transparency inherent in such systems exacerbates existing economic inequalities and may undermine democratic processes and societal trust.

Even some of today's leading figures in AI recognize this challenge. In a June 2024 interview on the Joe Rogan Podcast, Sam Altman, CEO of OpenAI, stated: "I think at some point we will do something like a UBI … but that's not sufficient. … We have a lot of ideas about this — there's a way that we share ownership and decision-making over the future." He continued, "A thing I say a lot about AGI is that everyone realizes we're going to have to share the benefits of it, but we also have to share the decision-making over it and access to the system itself."

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Altman proposed a world where individuals each own a portion of the system, saying: "You get one-eight-billionth slice of the system … you can sell it, pool it, use it … and with that you get a voting right over how this is all going to be used." While these values align with principles of decentralization, history shows us that espoused values are often undermined by corporate incentives and governance structures. Facebook's transition from openness to control serves as a cautionary tale. Without robust technical and policy safeguards, today's promises can easily give way to tomorrow's monopolies.

Decentralization in AI through Blockchain

Decentralization presents a compelling alternative to the challenges posed by centralized AI systems. Leveraging blockchain, decentralization can transform AI governance, ensuring transparency, fairness, and inclusivity. Blockchain technology, underpinned by

cryptographic innovations, provides an immutable and transparent ledger, which can facilitate secure decentralized interactions across AI applications.

The following list represents some of the key advantages of blockchain technology in decentralizing AI:

- **Privacy-preserving data use —** Cryptographic tools like zero-knowledge proofs, homomorphic encryption, and secure multi-party computation — many pioneered within the blockchain ecosystem — allow AI to utilize sensitive data without compromising user privacy. These technologies also create pathways for individuals to securely monetize their data, contributing to AI models while maintaining control and anonymity.
- **Participatory governance —** Decentralized autonomous organizations (DAOs), and blockchain-based governance mechanisms more generally, offer an inclusive framework for decision-making around AI development. They allow communities to propose, vote on, and enforce policies using transparent protocols, making AI governance more accountable, resilient, and representative.
- **Fairer value distribution —** Blockchain-based systems can compensate individuals and organizations that provide data, compute power, or services in a transparent, rule-based way. This helps redistribute economic value more equitably, reducing the risk of monopolistic control.
- **Model transparency and integrity —** Through smart contracts and cryptographically secure audit logs, blockchain makes it possible to verify the origin and behavior of AI models throughout their lifecycle. This transparency helps build trust and mitigate risks of manipulation or unintended harm.
- **Lower barriers to entry —** By promoting open standards and composable modules, blockchain infrastructure empowers smaller developers and startups to create AI solutions without relying on centralized cloud platforms or proprietary ecosystems.
- **Permissionless innovation —** Developers can build and deploy AI applications directly on decentralized networks, removing the need for approval from central gatekeepers. This fosters greater experimentation, diversity, and creativity in AI systems.
- **Reducing AI opacity —** Blockchain offers mechanisms to trace and document how decisions are made within AI systems. This reduces the 'black box' effect and enables stakeholders, from regulators to end users, to better understand, question, and govern AI behavior.

Effective Policy as a Driver of Decentralization

Effective policy frameworks are essential to promote decentralization and ensure AI development aligns with societal good. Current regulatory ambiguities often advantage centralized corporations, which typically possess significant financial resources and lobbying power, enabling them to influence policymakers in favor of business interests rather than broader societal benefits.

Therefore, regulatory frameworks must explicitly support decentralization, creating incentives for organizations to adopt decentralized models by reducing regulatory burdens for truly decentralized systems. Policymakers should establish clear standards distinguishing decentralized systems from centralized ones, ensuring that decentralized entities benefit from favorable regulatory conditions, thus leveling the competitive landscape.

In addition, policies must mitigate the disproportionate lobbying capabilities of centralized AI corporations, ensuring a more balanced representation of decentralized AI advocates in policy discussions.

Recent public opinion data further underscores this policy imperative. According to a 2025 Harris Poll commissioned by Digital Currency Group (DCG), 75% of Americans believe decentralized AI is more supportive of innovation and progress than centralized AI, and 71% view it as more secure for their personal data. The survey also found that 77% of respondents see decentralized AI as more beneficial to society overall, with a majority of both Democrats and Republicans expressing a preference for it over centralized alternatives. These findings reflect a growing public appetite for AI systems that prioritize transparency, data control, and equitable access, reinforcing the urgency for regulators to create an environment that nurtures decentralized solutions. Policymakers should foster inclusive dialogues, prioritizing societal interests over corporate lobbying influences.

We can also look to technical governance innovations like those explored in Anthropic's Constitutional AI framework. By introducing a "constitution" of guiding principles for model behavior, Anthropic

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provides one example of how oversight can be embedded into AI design. Yet this raises new questions: *Who drafts the constitution? What process determines its contents? Can such frameworks become truly democratic?* Blockchain-based voting and decentralized governance may be a necessary layer to ensure these systems reflect the values of the broader public, not just a handful of researchers or executives.

Conclusion

We stand at a critical juncture in technological advancement, where decisions about AI governance today will significantly shape future societal and economic structures. The Decentralization Research Center champions a vision for AI that emphasizes equitable opportunity, broad societal participation, and transparent governance. Decentralizing AI through blockchain is more than technical progress — it represents a pivotal shift toward a fairer, more inclusive future, aligning AI's profound potential with societal welfare rather than concentrated corporate power.

As physicist Max Tegmark reminds us in his book *Life 3.0: Being Human in the Age of Artificial Intelligence*, "Let's fight [AI conflicts] not with guns, but with debates, votes, and policies to help democracy shape the future we want." Decentralization is how we ensure that that future is shaped by and for the many, not the few.

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