

We need to replicate Aadhaar experience in foundational AI

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There has been a spate of reports and opeds exhorting India to build an LLM (large language model) or an SLM (small language model). Most commentators agree that it is strategically important for India to have its own capability in these foundational AI models given that they are currently at the heart of AI, which is one of the most important general-purpose technologies of our times. The US and to a lesser extent China control this technology and may restrict access to it in the future.

Can't afford to miss this

We have missed out on building capability in some important technologies in the past. We can't afford to miss out on this one.

GUEST ARTICLE

Since we have not done it in the past we need to figure out "how" we can quickly jumpstart and develop fundamental technologies in AI. At the heart of this is the lab-to-market capability for developing emerging new technologies and taking them to the market. This capability resides in multiple sectors – universities and national labs, industry, and startups.

We have to combine the lab-to-market capability with India's traditional strength of frugal R&D and innovation. The reason is that the current geopolitical situation may place restrictions on the computer power we can access. DeepSeek is the classic frugal disruptive innovator. Their business model is creating a new market for foundational models for customers who could not have afforded the ones from the incumbent AI platform companies. DeepSeek's current focus on programming, math, and reasoning and lack of experience in



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enterprise or consumer IT markets may not be a direct market threat to incumbents. But, as in the case of many earlier disruptive innovators, it may be only a matter of time before DeepSeek can catch up. Like they have done with an image generator:

Disruptor mindset needed

The Indian initiative for developing a foundational model needs to have this disruptor mindset. We need to optimise the cost and efficacy of a foundational model. India AI Mission has got off to a quick start and has released a call for proposals for building Indian data trained models for Indian applications. While the India specific problems focus is great, we would have liked the option where a national mission mode team is assembled to develop robust general purpose foundational models that we can internationally benchmark for effectiveness and efficiency. These foundational models can become the bedrock for smaller models and applications.

The US and China have had a head start since they have had large home-grown internet platform companies

that have built the expertise to manage compute power and large data sets. In fact, the breakthrough algorithms that are at the heart of the current generation of foundational models came from Google, and Meta open sourced its Llama model which became the nucleus for other models including the one from DeepSeek.

While India has limited expertise in this domain, one of the options before India is to attract the top professionals in India and of Indian origin to jumpstart our efforts. It may be easier to attract these professionals if we choose the option of a national mission mode programme. This elevates the objective to a higher national call for duty and provides a more flexible organisation for these professionals.

Finding the Nilekani/ Asbe of AI

The closest analogy of successful mission mode programme and mass product combination is UIDAI-Aadhaar and NPCI-UPI. These missions leveraged the best of Indian talent – some of them volunteering their expertise, worked with Indian companies, leveraged the best technologies, and worked in an intense mode. The foundational AI mission must learn the best practices from these missions.

Initially, the govt will need to provide incentives for customers to use Indian foundational models – like the current zero user charges on UPI.

Foundational models are essential to ensure we are ready to develop the next wave of AI technologies. The next wave is likely to go beyond current models and include an awareness of our physical world and an increased ability to reason.

Can we find the Nandan Nilekani or Dilip Asbe who will lead India into this critical future?

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