Lossfunk

Imagine YC for AI. Or, a Bell Labs for AI, where highly talented people aggregate to solve the world's big, open problems using AI that change the way our world works.

At Lossfunk, we're building an AI lab where people constantly live in the future and spin out startups for solving today's problems as they iterate their way to breakthroughs.

Paras Chopra is building Lossfunk as it is a perfect alignment of his skills and passion.

- Knows the ins-and-outs of building a business, having seen the journey of a startup from the first git commit to an eventual significant exit
    - Bootstrapped Wingify from 0 to $50mn ARR and sold it to private equity for $200mn [Hacker News thread]
- Is highly technical and understands AI/deep learning in depth
    - Writes code regularly. Recently, wrote a transformer architecture from scratch in PyTorch and trained a language model for proteins [Github profile]
    - Pursues active research [Google Scholar] [AI explorations]
- Running a AI hackhouse + 6 weeks residency program in Bangalore
    - 30+ builders across three batches [batch 1] [batch 2] [batch 3]
- Knows what it takes to build from India for the world
    - 98% of revenue of Wingify came outside of India (50% from US itself, rest from Europe, Australia, Japan)
- Has an online reach and a wide network to give projects an exposure:
    - ~200k audience on X to share projects that get incubated in the lab

Why build an AI lab from India?

Statistically speaking, India with the most population should have the most talented people in the world. Shouldn't this mean that India ought to be at the forefront of building AI?

But that's not the case.

A significant number of top 0.1% young engineers from India either go for PhD or get a high-paying job at FAANG. Startups offer a third alternative to economic mobility.

It's ironic that while Indians are at the forefront of the tech scene in the US, almost no investor in India is willing to bet on Indians who're trying to solve technically hard problems for the world. The majority of the startup scene in India is about consumer-tech or SaaS.

Nobody in India is investing in risky R&D. And that's the gap we want to fill.

Resources needed to make this happen

Being at the frontier of AI requires three ingredients: environment, talent, and compute.

Regarding the environment, our focus is to select highly ambitious and talented builders, surround them with peers who're equally skilled + ambitious and then give them enough time and guidance to help discover what the world needs that they can solve for. This is why the program is year long - it takes a decent level of exploration to iterate to a problem statement that's both valuable *and* solvable.

Regarding talent, our thesis is that Indians all over the world are driving AI and tech forward. But they're not doing this while remaining in India because the economic opportunities are better in the west. The only way we can prevent brain drain or even reverse it is by providing bright people a place where they can find their peers and make enough money to feel they're not missing out on economic opportunities.

Lossfunk's solution to both is to build an AI lab where the highly talented builders aggregate, get inspired by each other and then make significant money for themselves via equity in the innovations they end up creating.

Regarding compute, over the long term, it will be funded by the equity value of the startups that emerge from the lab.

How can you contribute?

If you're passionate about the mission, there are several ways you can contribute:

- **Build things**. The actual research will be carried out by highly-talented technical builders who will own a large equity in innovations they help create.
- **Offer your network and advice to builders.** Builders can use your network to get access to potential customers or investors, plus your domain expertise and advice can help them build relevant use cases.
- **Invest in spun out startups.** You can commit to co-invest in startups that emerge from Lossfunk.
    - We seek patient capital with a high risk tolerance, as technical breakthroughs are unpredictable
- **Provide compute or credits.** If you're an infrastructure provider, helping builders and new startups with compute or infrastructure will ensure they keep building on your stack as they grow and become large companies. AI research requires significant GPUs/compute infrastructure, so whatever contribution you can make, it'll help.
- **Give a grant to the lab.** Governments and philanthropic organisations can support the mission by offering grants. This will be especially useful at the start when lab expenses need to be frontloaded.

List of supporters

Here's a list of those who have given an indication to support this project:

- Vishal Sikka (ex-Infosys CEO)
- Neeraj Arora (ex-WhatsAPP CBO, now General Catalyst)
- Logan Patrick (Google Gemini lead)

- Kunal Shah (founder, CRED)
- Mukesh (founder of Myntra and Cultfit)
- Rainmatter, investment arm of Kamath Brothers (founders of Zerodha)

Illustrative list of builders who have indicated interest or support

In a call for builders put up by Paras, he got over 1000+ applications. He has spoken to 100+ people since then.

This list includes:

- Expat engineers working at AI labs (OpenAI, Meta, Apple, Microsoft, Google, Cohere, etc,)
- Tech founders from India and abroad
- IIT graduates
- Professors and graduate students from IISc, Bangalore
- Creators of popular open-source models and AI projects

Examples of the kinds of open problems Lossfunk will pursue

- Domain specific reasoning models
- Auto-curriculum design for reinforcement learning
- Decentralized training of models on commodity hardware
- Data efficient post-LLM paradigms for AI via program synthesis
- RL for open-domains that have non-verifiable ground truth
- Reasoning over ultra-long context (entire code bases)
- Video and image based reasoning models
- Achieving 9-nines reliability for AI agents
- On-device, cheap, low-latency voice-to-voice reasoning agents
- CPU-targeted models for local inference
- Always-on automated scientific discoveries
- Test-time learning and adaptation on data unseen during training
- Automatic PTX and CUDA optimizations
- Deep research for rare diseases

For a full list of ideas the lab encourages builders to explore, check out this Google Sheet.

Proposal: Builder Program

Lossfunk is kickstarting a 1 year full-time program based out of Bangalore, India where highly ambitious builders will pursue breakthrough AI innovations, with an ultimate goal of spinning out a startup of their own.

We expect builders to start spinning out companies starting the first 4-6 months from their joining.

As an example, think how Linux was created, which led to Redhat, a massively successful company. This formula of first making a technical advance and then forming a company around is well-tested (Apache Spark -> Databricks, GPT2 -> OpenAI, AlphaFold -> Isomorphic Labs, Stable Diffusion -> Stability AI).

This program is expected to start soon (April/May 2025)

Standard deal we offer to builders

- 1 year full time program in Bengaluru, India with office space
    - On-site is strongly recommended, but remote is OK for exceptional builders
    - For 1 year, we will jointly explore breakthrough AI innovations. When we get a clear signal of real world adoption, the lab will help spin out your startup
        - You can be the sole founder, but we strongly recommend starting a company with a co-founder (who you will likely meet in the program)
- Rs 15 lakh equity-free grant per person for a year to make sure no builder dips into their savings during the program
    - Rs 1 lakh/mo for living expenses (enough for a decent life in Bangalore)
    - Rs 50k/mo for project-related explorations and spends (compute, software, services, marketing, legal, design, etc.)
    - Rs 1 lakh relocation assistance grant to settle in Bangalore (on actuals)
    - Interest-free loan for security deposit for house (up to Rs 2 lakh)
- Pre-seed funding when the startup spins out
    - USD 125k for 7% as SAFE note + connects with investor network
- Advisor equity in all startups that emerge from the lab while you're part of the program
    - We require a 1% advisory pool in all startups to be created and shared between builders. This aligns incentives for collaboration between builders and effectively acts as an insurance such that whenever there's a breakout success from the program, everyone benefits.
- Access to top AI builders/researchers across the world
    - Our network includes people at top labs OpenAI, Deepmind, FAIR, AI2, Cohere, Mistral, Berkeley AI Lab, and IISc
- Rolling admissions, but limited to only 30 builder-in-residence positions at any time to ensure everyone gets focus
    - New ones will only open when a builder graduates or exits

Thesis for value creation: 10x improvement that’s irreplaceable

We believe value in the world is created when something comes along that’s 10x better than what people have been currently using. When it comes to capturing that value, it’s only those who are irreplaceable that are able to do that while easily replaceable products get commoditized.

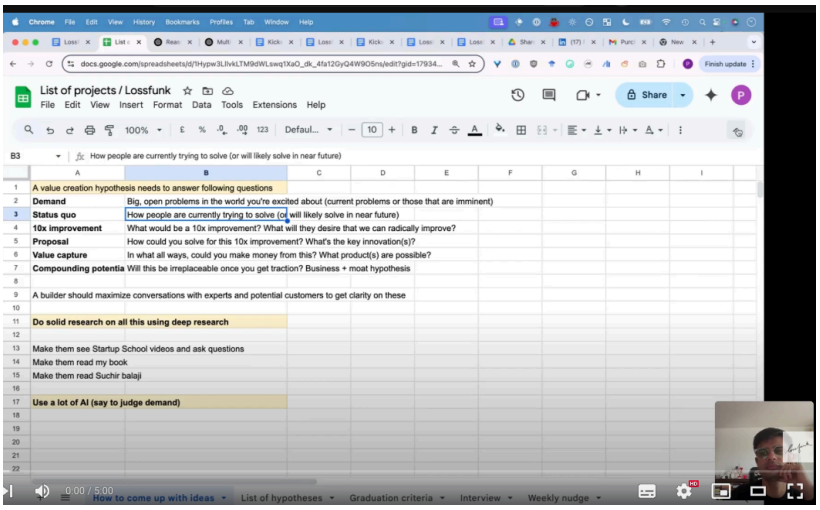
Successful tech companies do *both*: build core technology that provides 10x improvement and then use that advantage to interface directly with the end customer with a deep integration into her needs, thereby becoming hard to replace with alternatives. Nvidia is a great example of it - they started with core technology of GPU that gave 10x improvement over CPU on certain workloads, and then over time they invested in drivers and libraries like CUDA to become de-facto choice amongst developers.

This thesis drives our program. Over the course of the year, our builders will research, build prototypes, talk to experts/customers and iterate to discover a value creation hypothesis that answers the following:

Demand	Big, open problems in the world you're excited about (current problems or those that are imminent)
Status quo	How people are currently trying to solve (or will likely solve in near future)
10x improvement	What would be a 10x improvement? What will they desire that we can radically improve?
Proposal	How could you solve for this 10x improvement? What's the key innovation(s)?
Value capture	In what all ways, could you make money from this? What product(s) are possible?
Compounding potential	Will this be irreplaceable once you get traction? Business + moat hypothesis

Discovering big problems where you can deliver 10x improvement and then become a de facto player is what we aim to do.

Walkthrough of value hypothesis: https://www.youtube.com/watch?v=-OA6XTPjhJM



The lossfunk brand: how a flywheel will emerge that'll benefit all projects

During the course of the program, all builders are strongly encouraged to build in public and regularly publish their work under the Lossfunk brand. This means that as our builders produce interesting work, over a period of time, the Lossfunk brand will get known in the AI circles and each new project will get the initial attention needed to iterate.

This compounds Lossfunk as a long-term distribution channel which helps all builders benefit from each others' work. A strong brand known for AI will also help our graduated startups during fundraising.

Here's why ambitious people should join the program

With this program, you get an insane level of optionality.

	Builder-in-residence	**PhD**	**Job**	**Startup**
Time investment	One year	5-6 years	Indefinite	Uncertain
Your savings	Remain untouched	Remain untouched	Increases	Decreases
Equity	90% of equity (along with your co-founders) + advisor equity in many other startups	None	~0.1%	100%
Ownership and Impact	High	High	Low	High
Recognition	High (you own the IP)	Medium	None (company	High

			owns IP)	
Peer group	Large group of highly ambitious people	Academia	Varies	Co-founders
Mentorship	Researchers and entrepreneurs	Professor	Manager	Investors
Nature of research	Applied, with real-world uses	New ideas, with papers	Varies (if at all)	None

Benefits

- Immersive and intense one year dedicated sprint for solving a big open problem
- Direct access to entrepreneurs who've built successful companies before (Paras and his friends/network)
- Peer group to learn from (you will co-build with people who's as motivated and talented as you are)
- Proven playbook (from Wingify) on zero-to-1 journey of finding product-market fit and getting traction globally
- Assistance with formation of the company with introduction to lawyers, and guidance on backend operations like payroll, etc.
- Weekly technical and product-focused talks on AI by top researchers and entrepreneurs across the world
- Rs 6 lakhs grant for compute/GPU experiments

Why Lossfunk is the surest way to build the next great AI company

	Lossfunk	**Academic AI lab**	**AI startup**	**Industrial AI lab**
Focus	Value discovery	Technical research	Uses APIs	Technical research
Projects per person	Many simultaneous explorations	Few	One	One
Output	Usable artifacts (like models, open source libraries, hosted benchmarks etc.)	Papers	Product	Internal service
End goal	Changing the world using AI	Progress in a narrow domain	Revenue	Products

At Lossfunk, builders are expected to pursue hard questions and explore uncharted ideas deeply. We expect that over the course of exploration, new opportunities will be discovered that can be turned into commercially relevant use cases.

Lossfunk is inspired by following exceptional labs and venture builders:

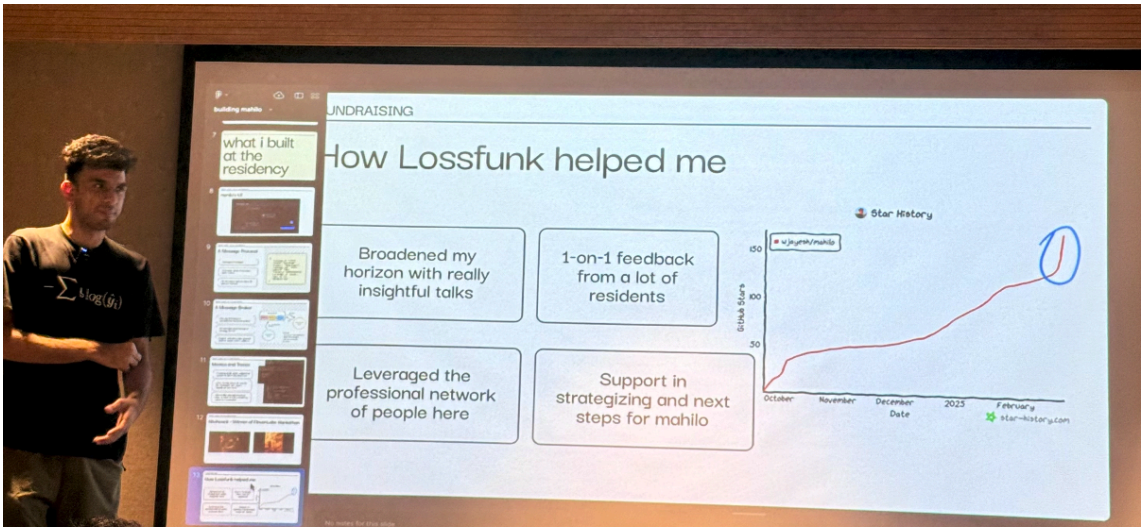
- Ion Stoica's lab at Berkeley AI lab has spun out Apache Spark, Databricks, Anyscale, VLLM, SGLang, Chatbot Arena, Ray, etc.
- Robert Langer's lab at MIT: Called the Edison of Medicine, Robert Langer's lab alone or in collaboration has given rise to 40 companies, all but one of which are still in existence. Collectively, they have an estimated market value of more than $23 billion
- Flagship pioneering: They do 100s of early stage venture hypothesis exploration through an inhouse team of PhDs and postdocs, ultimately spinning off 4-5 companies each year. They were the ones behind Moderna, the multi-billion dollar company that pioneered the use of mRNA for delivering vaccines.
- Idealab: Created pay per click technology which Google bought and became adwords
- Fairchild Semiconductors: the lab that built the entire Silicon Valley

We believe that the Transformers architecture was valuable only once its utility in terms of ChatGPT was unlocked. This is why our focus will be on the end-user utility which innovative research eventually leads to.

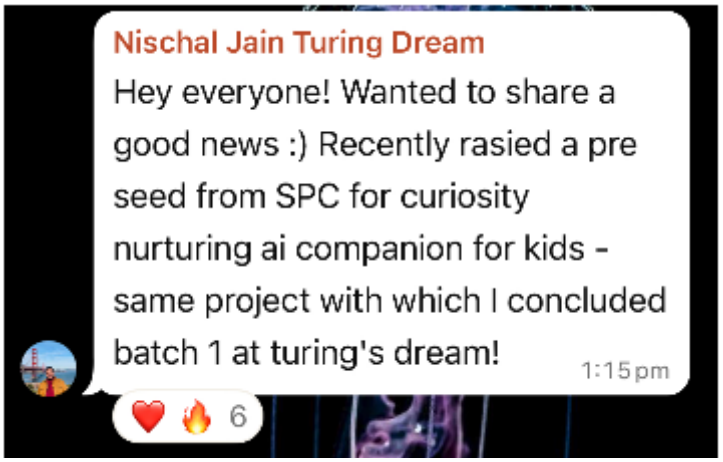
Testimonials

What builders have to say about the 6-week residency program (called Turing's Dream) that's precursor to the one year builder program.

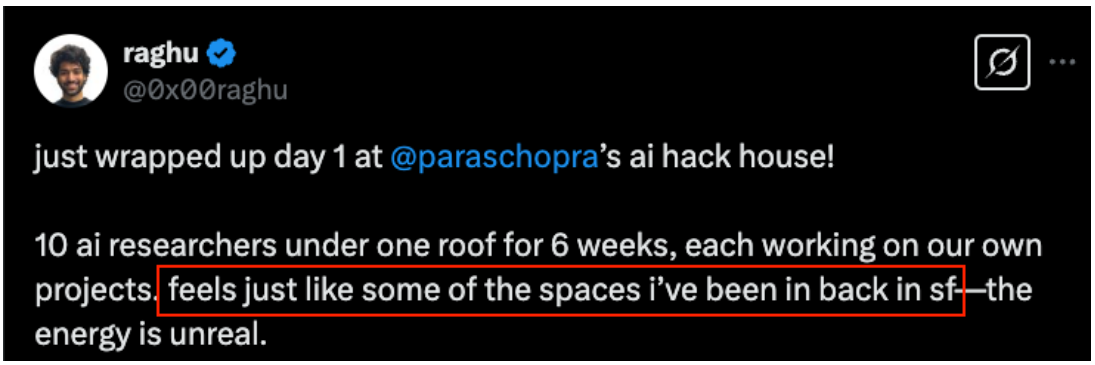
Jayesh (Batch 3 resident)

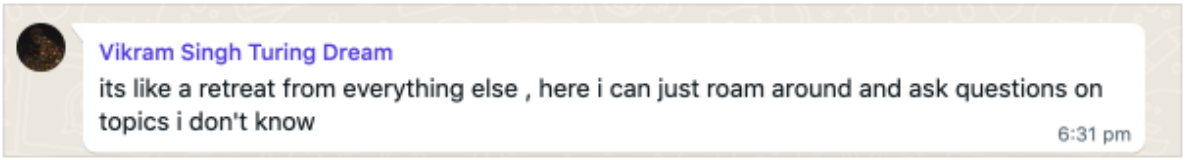


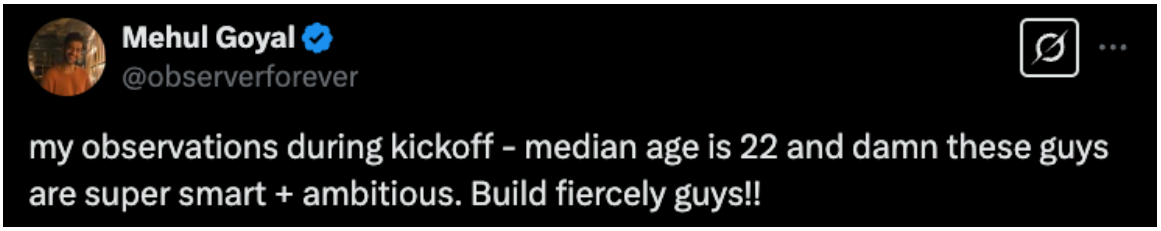
Nichal Jain (Batch 1 resident)

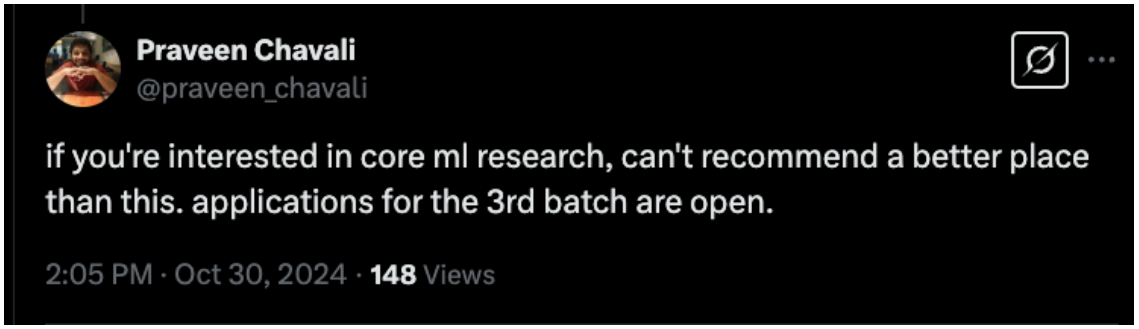


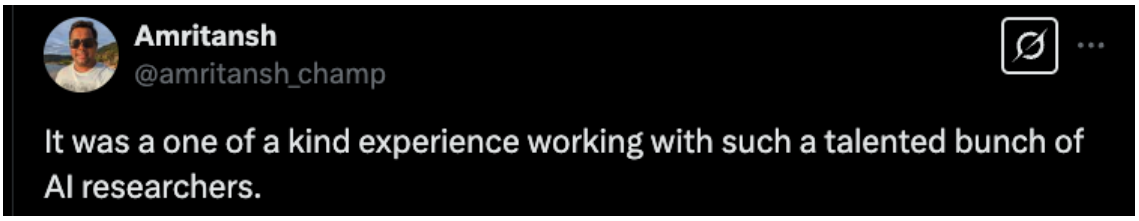
Raghu (Batch 2 resident)

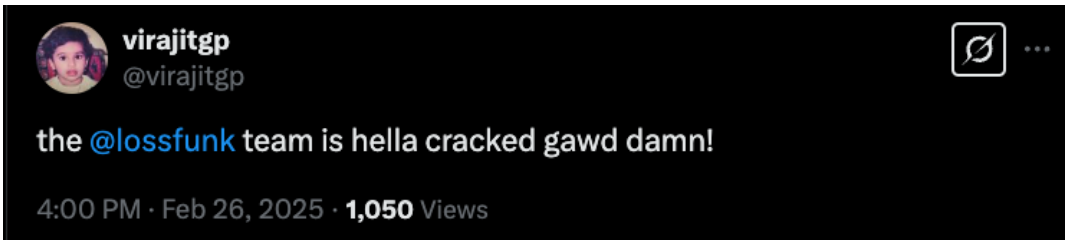


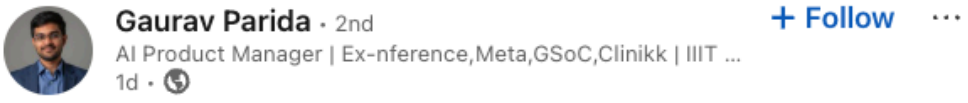












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AI Product Manager | Ex-nference,Meta,GSoC,Clinikk | IIIT ...

1d ·

Glad to share that I've recently completed Batch 3 of Lossfunk—the AI residency program by Paras Chopra

I've wanted to post about this incredible journey for a while, and I'm finally putting it into words. Lossfunk has been nothing short of amazing, a place brimming with curiosity, knowledge-sharing, and a positive-sum mindset

From engaging weekly talks with top experts to brainstorming with some of the most driven and curious batchmates, this experience has been truly transformative. It was inspiring to witness peers achieve remarkable feats - winning hackathons, diving deep into CUDA programming, fundraising and building from first principles. The energy and ambition in the cohort was contagious!

FAQs

Is one year enough to solve big, open problems?

There are two ways to look at big, open problems:

1. No problem is ever solved. Human desire has no limits. This is why startups regularly keep coming along and disrupting existing players.
2. One year is enough to do sufficient exploration to know whether there is a chance you could make enough progress on the problem to justify further time and money investment

The goal of the program is to not spin out fully-formed OpenAI or Nvidia of the future, but to build enough conviction about a problem and gain background knowledge for it so you feel confident of working on it for the next decade or so.

What kind of people will you select for the program?

We select people with following attributes:

- Extremely determined to start a company
- Highly technical (i.e. they must know coding really well)
- Highly ambitious (i.e. must have had a history of self-initiated side projects)
- Deep passion for artificial intelligence
- High intelligence and curiosity (i.e. must know a lot about a lot of things)

Do I need an idea of my own to enter the program?

Yes. You need one or more ideas or directions that you want to explore during the program. Over the course of the year, you can pivot but you do need to specify what you're interested in or are currently building when you enter the program.

What if I have an existing startup? Can I apply?

If you're an early stage startup exploring ideas and open to pivoting, you can apply to the builder program. All co-founders will have to clear the interview process. The program remains the same: you will solve big, open problems and try to get real-world adoption for your projects within a year, and upon graduation you'll be offered the standard deal.

Are pivots to a different idea allowed during the program?

Yes! We fully expect builders to pivot as they change their mind when new data or insight comes their way.

What's the criteria for judging whether my project is ready to graduate and become a startup?

You (along with your potential co-founders, if any) will pitch to the lab, comprising a panel of entrepreneurs and investors. **The primary criteria will be evidence of real-world use/adoption/feedback for a thing you've built**. This can take the shape of user growth, feedback, adoption, contracts, revenue, github stars, model downloads, etc. The result of this pitch is either funding, or feedback on how to iterate.

We expect builders to start spinning out companies starting the first 4-6 months from their joining.

How will the funding work?

When we fund your project, we will invest $125k as SAFE note at a valuation cap that translates to 7% of your company. Along with this, we help you craft a pitch, make one-to-one introductions to investors for your next round.

To be clear, raising any additional funding beyond $125k for 7% is optional and your startup can choose to remain self-funded after this initial investment.

Where will I get compute, credits or other resources for my project?

You will get approximately Rs 6 lakh (~$7000) to spend on your project over the year.

Each month, you will get Rs 50k/month (~$600) to spend on compute or anything else related to your project. Any unspent money from this pool will accumulate, enabling you to spend a larger amount in future. In case it's justified, you can also take an approval and spend your grant in advance, utilizing your entire pool in one go (say on a large training run).

As a lab, we will apply for grants, crack partnership deals with compute providers for free credits or negotiate for discounted compute costs. We will constantly strive to find ways to provide free or significantly subsidized compute to our builders.

What's your open source policy?

We strongly encourage open sourcing models and code. In fact, a strong criteria for funding is adoption of your open source project (even if no revenue has been generated). We feel that open source is a great way to build distribution and get to know real problems in the marketplace.

However, we encourage a business licence (like elastic licence) for open source projects which allows for commercial use, hence driving adoption, but keeps the doors open for business viability by ensuring only the startup behind the open source project can offer hosted versions and paid products around it.

(Like you, we love fully permissive licences like MIT, but we need to find ways to fund more open source contributions and entities with capacity to pay is one way to do that)

What will be my legal status during the program?

You will be a fulltime consultant or employee of Lossfunk during the course of the program.

Will I be expected to start a company by myself or or with co-founders?

You can start a company on your own, but we encourage you to find a co-founder during the course of the program. These co-founders can be from within the program or outside it. We require co-founders to have worked together in the past, either within the program or outside it. If you start a company alone, you should know that at graduation, we may require you to ask to find a co-founder or set aside a pool to hire co-founders in future.

For equity split between co-founders, we recommend an equal split, but are okay with an unequal split if the founding team is okay with it. We're also okay if some builders join as non co-founders with much less equity in a project that they were not involved with.

What happens once I graduate from the program?

At Lossfunk, we're committed to growing the community over time. Once you graduate, you remain an alumnus of the program. We facilitate and encourage collaboration amongst different builders and researchers of the program.

Once you're inside Lossfunk, you get a network and opportunities for collaboration for a lifetime!

What if I want to leave the program early?

You can leave the program at any point of time, or we can let you go. It's like a job or a PhD program in this respect.

There's a probation period of 45 days since the joining date. Within that period, either us or you can decide that you're not the right fit and can exit the program without any future obligations.

If you exit after 45 days and within 1 year of exit, start a company related to the projects you were associated with during the program, you're expected to offer us equity in your company on the standard terms (7% equity for $125k + commitment to co-invest up to $375k)

We are happy to waive-off this requirement on a case-to-case basis. Also note that this only triggers when your startup overlaps with your projects. If you're starting an unrelated startup, you're not obligated to give us the deal (even though we'd love to invest!).

What if I get a funding offer for my project from somewhere else while I'm in the program?

Then it'll be like you leaving the program, and you'll be expected to let us invest in your startup at the standard terms of the program.

What happens if I don't end up starting a company within 1 year of the program?

That's fine. Not all builders may end up starting a company. You will be given 1 year to try to spin out a company or join a company that's emerging from the lab as a founder or early employee. If it doesn't happen, you can leave the program.

However, for the next 1 year, if you end up starting a company based on projects you were associated with in the program, you're expected to offer us equity in your company on the standard terms (7% equity for $125k + opportunity to invest up to $375k as SAFE note)

We are happy to waive-off this requirement on a case-to-case basis. Also note that this only triggers when your startup overlaps with your projects. If you're starting an unrelated startup, you're not obligated to give us the deal (even though we'd love to invest!).

Can I do consulting or other part time jobs during the program?

No. This program requires 100% commitment. We give equity-free stipend to ensure you are able to 100% focus on innovating.

Who owns the IP? Will multiple people be working on similar projects/ideas in the program?

People will own IP to their creations. There might be multiple people working on the same problems, but each will own his/her IP. We believe execution is much harder than ideas, so if IP ownership is clear, conflicts will be minimized. If there are conflicts, the lab will try to resolve them amicably.

You own the IP but we strongly recommend Lossfunk branding on your projects. This creates a positive feedback loop as all builders build their projects in public, reinforcing public awareness towards all Lossfunk projects. Ultimately, this benefits your project to get more eyeballs, faster adoption, and get easier intros with investors / new hires.

(imagine eyeballs that new launches from OpenAI get just because their brand is well-known collectively due to their projects, or benefits that startups accepted within YCombinator get).

Is remote allowed?

No. The value of the program is in physical interactions with peers. You get a relocation grant of Rs 2 lakh to help you to relocate to Bangalore. Only in exceptional cases do we allow remote participation in the program.

Is paper publishing expected?

No, but you're free to publish your findings as a technical report or even submit them to a top-tier peer-reviewed conference or journal.

Expanding on our philosophy

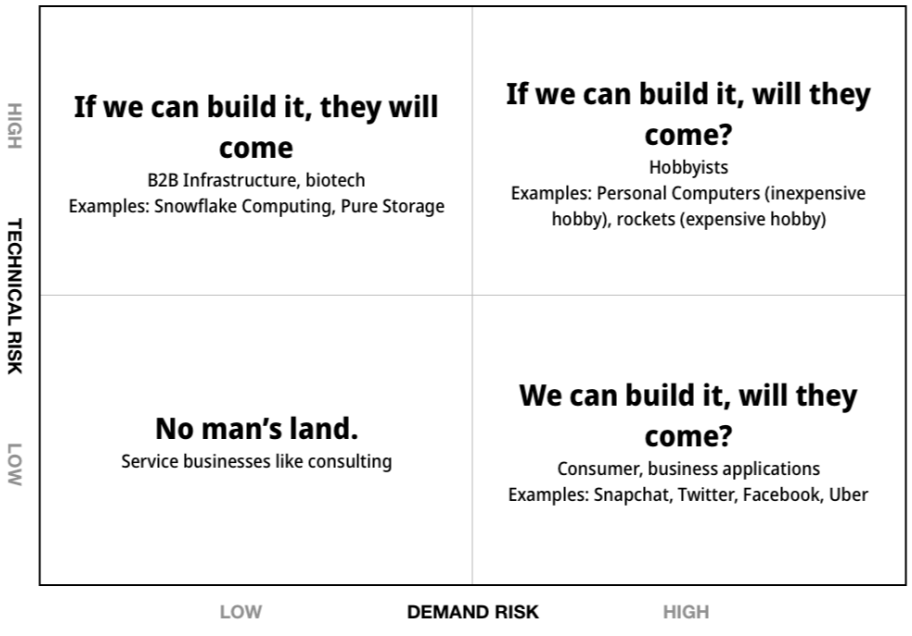
Take high-technical risk to solve big, open problems

Broadly, companies can be thought of as one of the following types:

- Market-based: these use existing technologies and science to meet an uncertain need in the market
- Research-based: these invent new technologies and sciences to meet a certain need in the market

In reality, as companies mature, this is a continuum as big companies do a bit of both. But when companies are startups, they prefer to reduce the number of unknowns and only take specific risks. So, startups can be broadly to be thought of taking either:

- Market-risk: we can build it, but will they buy?
- Technical-risk: we know they will buy, but can we build it?



The types of startups built by Lossfunk will fall into the quadrant of low demand risk, high technical risk. These are uncertain scientific and technical solutions for certain problems of today.

It's often assumed that research based startups are hard, but paradoxically they're easier because in such startups, since market risk is minimal, the entire scientific risk can be front-loaded and de-risked via prototypes and experiments at a relatively less cost.

Aim to be globally state-of-the-art in a niche

This is a forcing function to do high-quality work as you compete with the global best, and is the only viable path for startup success as domestic markets (e.g. India) are too small to support the continued growth of the startups that emerge.

Collectively pursue diversified portfolio of risky projects

Even though each builder will be focused on 1-2 problems, collectively Lossfunk will do a wide exploration. Through the advisor equity pool where each builder gets equity in another builder's startup, we ensure a collaborative environment is developed while giving everyone an insurance where they make money whenever there's a breakout success from the lab.

Two lines of evidence suggests that this model is the right way to go about producing scientific breakthroughs:

1. Bell labs: this portfolio of risky science models was famously followed by the Bell Labs where a variety of risky and non-risky scientific projects were being followed simultaneously and people were not evaluated individually, but rather progress was measured as a group. So risky science was made possible by the science that succeeded. This is why we were able to get transistors, and many other great inventions.

- https://www.industrytap.com/bell-labs-model-future-innovation/21009
- https://hbr.org/1993/07/how-bell-labs-creates-star-performers
- https://www.youtube.com/watch?v=AQaIb7eZz7o

2. Metascientific analysis: Prof James Evans of University of Chicago discovered that the best way to promote risky science is to aggregate risk. He suggests science should be done in the VC model where risky bets get underwritten by a diversity of approaches.

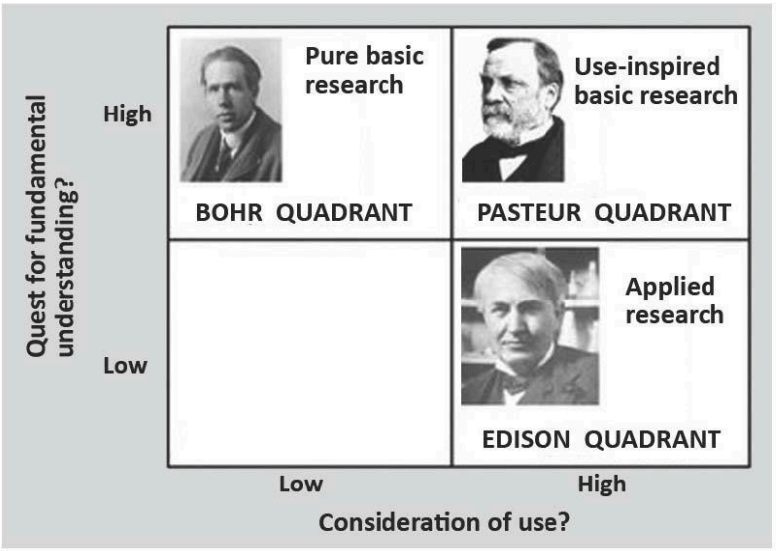
Via https://www.pnas.org/content/112/47/14569

> **A shift to riskier research would lead to more failures, which typically remain unpublished under current publication norms**. We find that publication of failures substantially increases the speed of discovery. Thus, science policy could improve the efficiency of discovery by subsidizing more risky strategies, incentivizing strategy diversity, and encouraging the publication of failed experiments.
>
> Policymakers could design institutions that cultivate intelligent risk-taking by shifting evaluation from the individual to the group, as was done at Bell Labs (43). They could also fund promising individuals rather than projects, like the Howard Hughes Medical

> Institute (44). Both approaches **incentivize the spreading of risk across a portfolio of experiments that reflect multiple research strategies, instead of evaluating each experiment separately and selecting safer opportunities**.

Pursue big breakthroughs while solving practical problems

We're inspired by Louis Pasteur as he simultaneously invented the field of microbiology and improved wine, beer and vinegar



> Pasteur's career exemplifies the integration of science and engineering in a single mind. Tasked with improving the processes of French wine, beer, and vinegar makers, a mundane industrial engineering project aimed at iterative improvement, he showed the role of bacteria in fermentation, and discovered anaerobic metabolism—a breakthrough in microbiology. Decades later, when studying diseases of livestock, a purely scientific research project, a botched experimental setup gave him the clue that he followed to create the first engineered vaccine, a watershed invention in medicine. Clearly this was a man with the aptitude and the inclination to pursue both scientific knowledge and practical applications. And it was Pasteur who said, "There does not exist a category of science to which one can give the name applied science. There are sciences and the applications of science, bound together as the fruit of the tree which bears it."

So, we intend to pursue the quest for fundamental understanding while delivering practical applications.