

AI x Bio x NYC x 2023

pillsbury



LifeX
Ventures

Cohosted by **LifeX x Pillsbury x SandboxAQ**

AI x Bio x Sep 19th 2023

AI vs. the #1 killer: cardiovascular

-- Robert Herman, **European Society for Cardiology & Powerful Medical**

-- Deepa Kumaraiah, Chief Medical Officer, **New York-Presbyterian**

- NYP is digitizing its enormous recordset of ECGs and cardiology results
- Powerful Medical can diagnose >35 conditions from a smartphone picture + it's cloud AI; and coming soon is prediction power looking days ahead
- One of the biggest obstacles to AI adoption in health systems is skepticism of the people
 - doctors in the front of house and teams in the back of house

AI vs. behavior change

-- Artem Petakov, cofounder, **Noom**

-- Luis Voloch, cofounder, **Immunai, Jimini**

- Hyperbolic discounting. People don't value prevention. They value beach season.
- Noom had to make something humans would actually pay for.
- Which means we had to include human coaching. After several years we had very little revenue. Then we added coaching.

- We have been very close to the GLP1s from the beginning. Novo Nordisk is an investor in Noom.
- Immunai meanwhile uses AI to make cancer drugs, and Luis's new one does psychotherapy with LLMs
- Many limitations of LLMs and AI still. Impressive demos but...
- The LLMs "go crazy" the more data they consumer in an interaction. This is very bad for complex multi-step interactions with real patients. Psychotherapy is 1000s of interactions
- The training sets are hard to clean. You can't train a robot on a human-human conversations; because humans know they are not talking to another human and behave differently.
- LLMs today don't have strategies. They are very blunt and direct. Therapists have steps



AI vs. bureaucracy

-- Mario Schlosser, cofounder, **Oscar Health**

- Mario is working to rebuild core processes in the company
- One of the biggest gifts of their system is architecture: all the data is in one place. Virtually no insurance company has this, but Oscar does
- "Big input" is a big problem. You break the LLM when you give a task that "takes a person more than five minutes" – which is most tasks in claims processing.

- We have been building many decentralized tools, some of which need to be centralized, such as the tools that break down huge queries into many small steps that the LLMs can handle
- OpenAI is the best and better enough that there is no reason to even look at the competition most likely. Small differences matter a lot here. A little worse is much worse.
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AI x Discovering Longevity

-- BJ Sullivan, **BioAge Labs**

-- James Peyer, **Cambrian BioPharma**

- Primer on drug discovery from start to finish
- Screening and target ID are traditionally the computational areas in drug discovery
- Now starting to optimize and design molecules - eg In Silico has a few of these
- But much more to do, e.g. Clinical Trial Protocol optimization, Trial recruitment
- Both BioAge and Cambrian have really exciting compounds in motion for muscle / exercise, which pairs very well with the new weight loss drugs (weight loss causes loss of muscle and fat)

Rising Stars: meet 5 exciting companies

-- Curated by Roy Ramon, **Powerful Medical**

- Soulside - Measurement-based mental health for high risk groups with AI-assistance
- Ultrasight - Remote cardiac ultrasound
- Bionic Health - AI-powered preventive health
- AvoMD - no-code app platform for clinicians

AI remakes the Rules

-- Zaw Thet, cofounder, **Exerai**

-- Nathan Renov, Intellectual Property, **Pillsbury**

- No-hardware app that identifies 24+ points and angles for remote monitoring and remote physical therapy
- Cheaper, easier, higher compliance

AI x Quantum x Biology

-- Andrea Bortolato, **SandboxAQ**

-- Amol Sarva, **LifeX**

- Quantum is here now: Sandbox simulates quantum physical interactions on normal CPUs/GPUs

- The quantum simulations are of field interactions of small biological molecules, and they are the only way to predict actual behaviors apart from experiment
- This is already in use by large biotech players to discover and refine molecules and targets; important revenue area in drug discovery



Photos

<https://drive.google.com/drive/u/1/folders/1CEqGj2wgnQRPDY9zaRiMJz1zFkHoTIV?q=type:image%20parent:1CEqGj2wgnQRPDY9zaRiMJz1zFkHoTIV>