

Everything Will Happen

Conditions Required for a Meaningful Human–Machine Collaboration

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ABSTRACT

Machine learning is making its way to the consumer market. Once it gets there it will warrant new interaction and design models, but also new software architectures (beyond the current monopoly of Model View Controller). This new reality will have effect on software businesses, user paradigms and the sustainability of programs. The status quo of machine based intelligence is one of hyper mathematical operations.

Aim 1

Can we start a conversation between design, humanities, technology and math about purposeful machine learning? I will attempt to facilitate this through open source initiatives and community discussions outlined below.

Aim 2

Can we build tools and technology that move beyond short term missions, and instead focus on sustainable long term thinking?

Throughout this process I will attempt to capture a new process of designing technology. A process that doesn't rely on short term limitation. The process will be public, transparent and scalable.

1. BACKGROUND

Citing agile mythology — the driver of the vast majority of “lean startups” — a classic life cycle of an early stage software business follows this process:

1 — Thinking

Exploratory thinking. Linking previous knowledge with new experiences. Curiosity around a topic will often trigger further reading, new conversations and independent exploration. Those seeds will wait for new motivation to trigger an idea. Experience and professional expertise will then help us predict if its worth committing to.

2 — Idea

Exploration we will hopefully get to a meaningful place, mature enough to harvest. Where research will become applied and targeted at what will be required to execute

the idea (an understanding of the sector and logistical considerations among others things).

Question 1: Sustainability of Thinking

This raises a question of sustainability. If we accept that we only have a certain stock of thinking in us (individually and as an industry) then by extension we need to use it in the most sustainable way.

Aggressive cycles of success and failures yield short lived businesses, but more importantly short lived thinking. This becomes more urgent when we begin to consider the amount of designing and building that we as an industry have been producing. Anything that we can physically think of, will be built. Thinking of an idea, makes it a reality. This notion challenges the taxonomy under which we examine ideas and build products. If we no longer need to be first, we essentially remove time from a product's cycle. Can we iterate our thinking rather than code?

3 — Build

Bootstrapped, or financed, an MVP will need to be built. The goal is to prove the concept. First internally with the team and then later publicly. Agile cycle of design, developments and adjustment will pave the way for mass traction. Which will prove a product's readiness for the market.

Question 2: Post MVC Internet

New technologies and products that use machine learning show us a future where a human needn't code each and every outcome. Machines can make assumptions and will require much deeper guidance. MVC based products will be replaced by far longer lasting paradigms.

We know that technology is getting better, faster and cheaper. Companies that focus on short term gains through nothing more than MVPs, manual traction and short financial gains make themselves obsolete in the near future.

4 — Traction

A lot has gone into the pot by now. The founders are likely to have bet their savings on the success of this idea, engineers and designers might have been promised equi-

ty, and seeds have been planted with VCs. The team lives the product 24 / 7—promoting it with as many people as possible. The goal is aggressive marketing, manually getting the product with as many people possible, showing numbers where it matters.

5— Success

This stage could have many different faces, but on a conceptual level the importance of this step is validation. The company may very well be running on the fumes of the core hypothesis at this point.

If validated – funding will come in, people will start getting paid, alarm bells will go off and the business will reach a healthier place. The alternatives are that the idea failed, or that the company is sold.

Question 3: Training machine learning with deep human thinking

In a graph where x represents time and y is thinking—could it be that we only started scratching the surface of what's possible? The urgency to build, before anyone else will, made us complaisant enough with binary ideas.

Can we come up with new thinking paradigms that can live up to technologies we haven't built yet (but we know are coming)?

2. TIMELINESS OF THIS RESEARCH

Model view Controller and the notion of stationary databases quite literally drive all consumer digital products. More importantly it is the core of how design is thought of, and taught.

With the current pace of progress we are likely to see full machine learning driven products in market within a year.

Some companies have already started monetizing machine learning algorithms as an amalgamated offering, but there are much larger disruptions to be had.

Aim 3: Measure the effectiveness of a machine learning driven system as an alternative media model

I will focus on discovery as the main opportunity when moving away from a classic (static) MVC models. The New York Times—for example— produces over 300 URLs every day. Having all of that content reach the audience it deserves is quite simply an impossible task.

I will attempt to design data sets that focus on recirculation and discovery. The system will need to use some sort of machine learning, and outcome will be measured using reader engagement and loyalty.

Aim 4: Investigate the potential of machine learning to drive a product in a compelling, complete and competitive way

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In order to measure this I will explore the possibility of building a site that doesn't have a static version. There is no content tree, nor tags, categories et al. The database will render content based solely on the user and their identity.

Currently available APIs by services such as Message Resonance by IBM Watson can determine how successful would a certain tone of message be with its recipient. Using cookies and simple Google Alerts we can yield great insights about individuals' interests (based on publicly available data).

3. STRATEGY

Through research, writing and public discussion I am looking to engage other researchers, institutes and commercial companies in this thinking.

Aim 5: Understand what can a mass of data, logically structured and semantically interpreted do for each and every one of us?

In order to measure the readiness of the technology and users I am hoping to build an app that will capture all available APIs based on a user prompt. The idea is to allow mass data and constant connectivity to promote wellbeing and “present” moment.

Designing user centered technology — and technologically think about “soft” issues.

We generate vast amounts of data – actively and passively. We are also vessels of emotions. Can we find a way to marry both of these languages to better our lives?

Aim 6: Once we have (anonymous) data recorded we could engage thinkers from the fields of quantified self, and machine learning to develop (open source) tools for users to engage with – using their own data.