Tech for social good

The discussion in 2019

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Ch 1. My background

My childhood dream

🌈Was to become a puppet master for Kofi Annan🌈

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then newly appointed UN Secretary-General💞

Then switched to become a development economist at the world bank working on global poverty issues.

Economics: my high school sweetheart ended in failed marriage 💔

At grad school, I realized I never liked economics after 10 years of commitment.

From dropping out of grad school to where I am now

I took a hard look at myself, my previous activities, etc to find what I actually like.

And noticed the times I had most fun while on my jobs and graduate study were when I was coding.

I learned python via MOOC, and got a research intern job at physics lab.

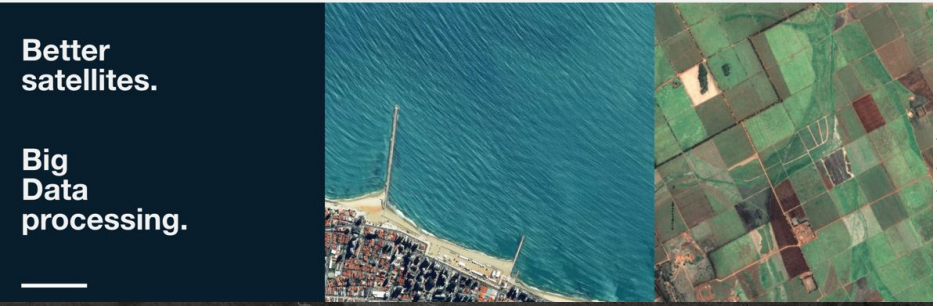
I wanted to take complex systems approach rather than economic modeling to analyze social phenomena.

1.5 years later, I got a job at the World Bank, and eventually became the first data scientist at their research department.

Personal lesson #1: do what you enjoy doing and find a way to contribute to the cause you care about.

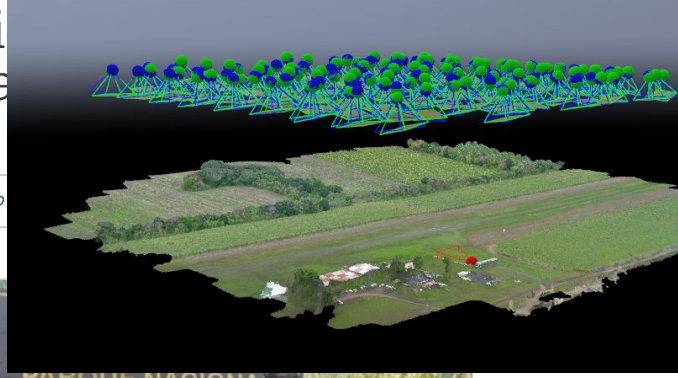
Be cautious of the mindset: “maximize your impact” or “optimize the use of your time” for your soul.

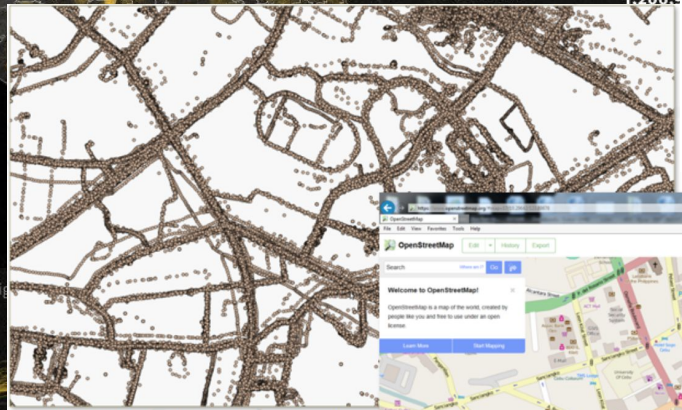
Satellites in Global Development



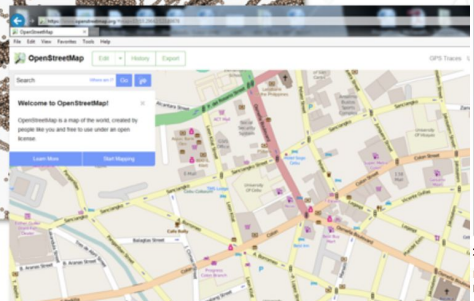
El Parque Naci
estudios con la
drones

Monitorean el estado de pastizales debido





Density of GPS location points captured from participating taxis during Cebu Traffic pilot (2013)



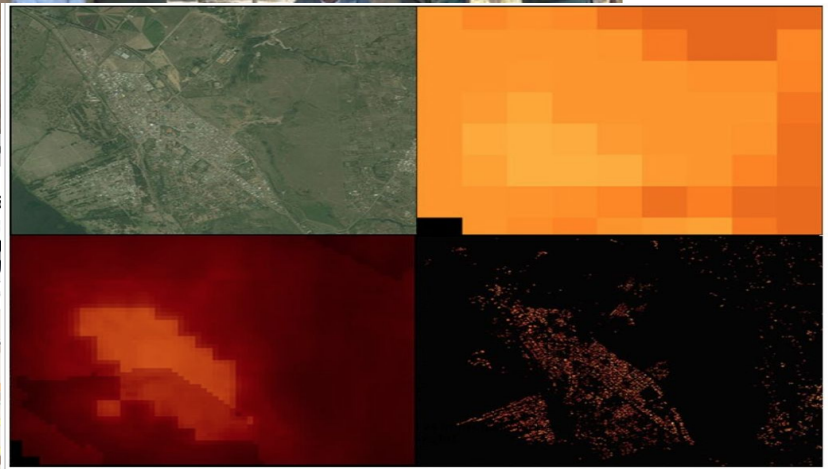
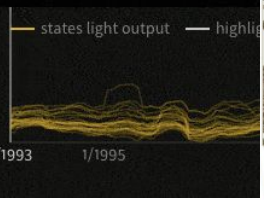


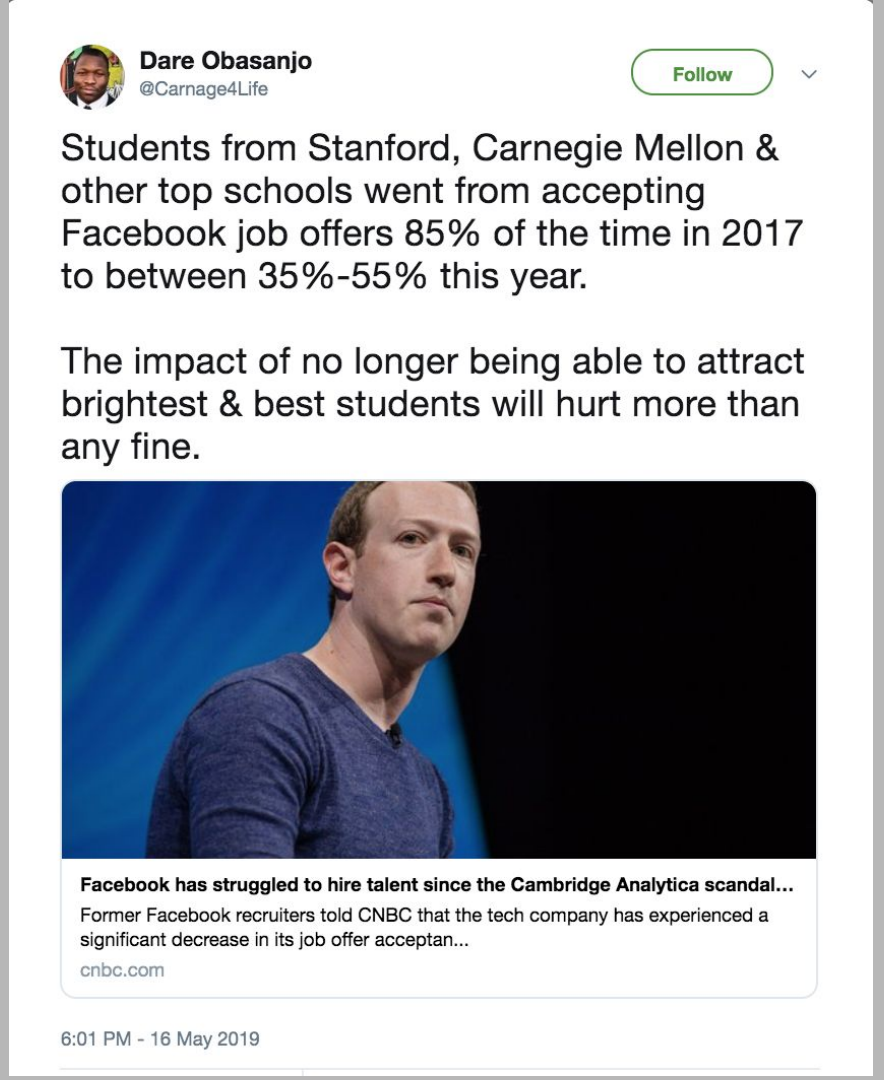
Image 1: Naivasha, Kenya.

DigitalGlobe satellite (upper left), gridded population of the world v4 from CIESIN (upper right), WorldPop (bottom left), output from Facebook model (bottom right).



Ch. 2 Tech for Social Good 2019

Post-Facebook scandals, more people cares about social/ethical implications of their tech work?



Computer science is a young field. Despite its enormous degree of influence, it hasn't figured out or made much effort to understand how it interacts with society.

c.f. civil engineering

The narrative shift from “Tech Optimism” to “Big Tech”

Tech for Social Good:
Inclusive Tech and Harm-Reducing Tech

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Inclusive Tech and Harm-Reducing Tech

Inclusive Tech = Where are the market failures that tech can fill?

Most of these are non-glamorous and tedious than sublime.

e.g. homelessness prevention

Inclusive Tech: bottlenecks

Supply side doesn't have domain expertise and may end up with projects with good intentions but also potentially catastrophic consequences.

- Tech solutionism
- Too much trust in domain experts

Inclusive Tech: bottlenecks

Demand side lacks experience and knowledge in tech and doesn't know how to make use of it.

(imagine old school nonprofits and government entities)

Inclusive Tech - how you might get involved

1. Fill the gap between demand and supply side to correctly identify market failures that tech can solve (consulting work)
2. Get involved with volunteer-run projects proposed by the organization that does 1 for you (DataKind, Code for ..., etc)
3. Even better, work *within* a social good organization: become an embedded technologist.

Side note: external volunteer model

+ Sustainability and maintainability
+ Volunteer burnout
+ Skill matching
+ Scope may be limited in “pilot study”

Tech for Social Good:
Inclusive Tech and Harm-Reducing Tech

Harm-Reducing Tech = How can we minimize the harms caused by Tech?

Increasingly urgent area as we've seen the moral failure and devastating impact from tech companies last year.

Harm-Reducing Tech varieties

+ Teach tech to others, especially to underrepresented community
+ Watchdog to your own employer and gov't (privacy, ethics, etc)
+ Research and share the best practice and toolings
+ Government: inform/educate lawmakers; research/share/implement the best practice
+ Journalism: privacy and security for journalists & their sources, evidence finding, data journalism
+ Activism: privacy and security for activists; anti-surveillance from state actors.

Harm-Reducing Tech example: AI interpretability

A case for AI interpretability #1: MISUSE

Proliferation of tools and increased accessibility to AI/ML models

+

hype among non-technical population that has access to products/public policies that could affect millions

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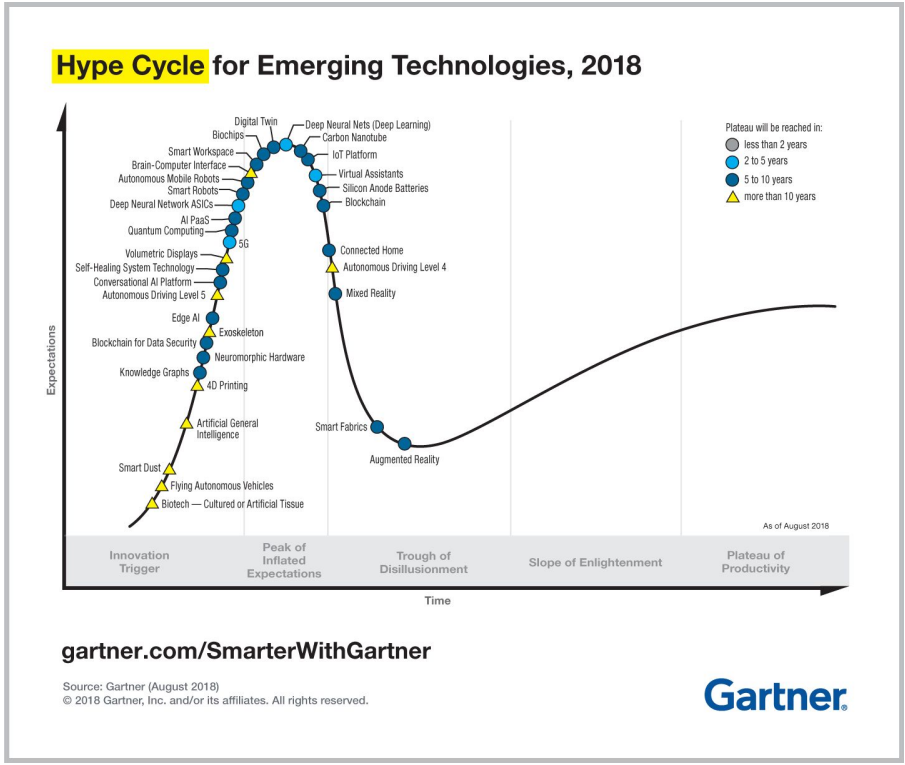
HORROR!



A case for AI interpretability #2: TRUST

Deep learning model may offer higher and better predictive model but with no transparency in its decision making.

There are missed opportunities in using these models when the situation calls for accountability more than accurate prediction.

Thank you for listening!

Reach me @kiwakosakamoto