

Implementing AI in a corporation

The good, the bad and the odd

Salla Franzén, Group Chief Data Scientist

Improving society

- Healthcare
- Accessibility (for people with disabilities)
- Education
- Climate and environment
- Agriculture
- Public services
- Public safety
- Home security, smart homes and cities
- Automation of transport
- Automation of repetitive tasks

Used as an oppressive force

- Military
- Police
- Government
- Social scoring
- “AI taking over the world”

AI in financial services – some application examples



Customers

Proactive, tailored advice

Data driven & real-time

Sustainability

Seamless &
unbundled services

AI in financial services – some application examples



Competition

Fintechs, challengers
& big techs

Payment service providers

Lending

Markets & Investment Banking

AI in financial services – some application examples



Regulations

AML & KYC

MiFID II & PSD II

Basel IV

Less new regulatory regimes,
more supervision

AI in financial services – some application examples



Technology

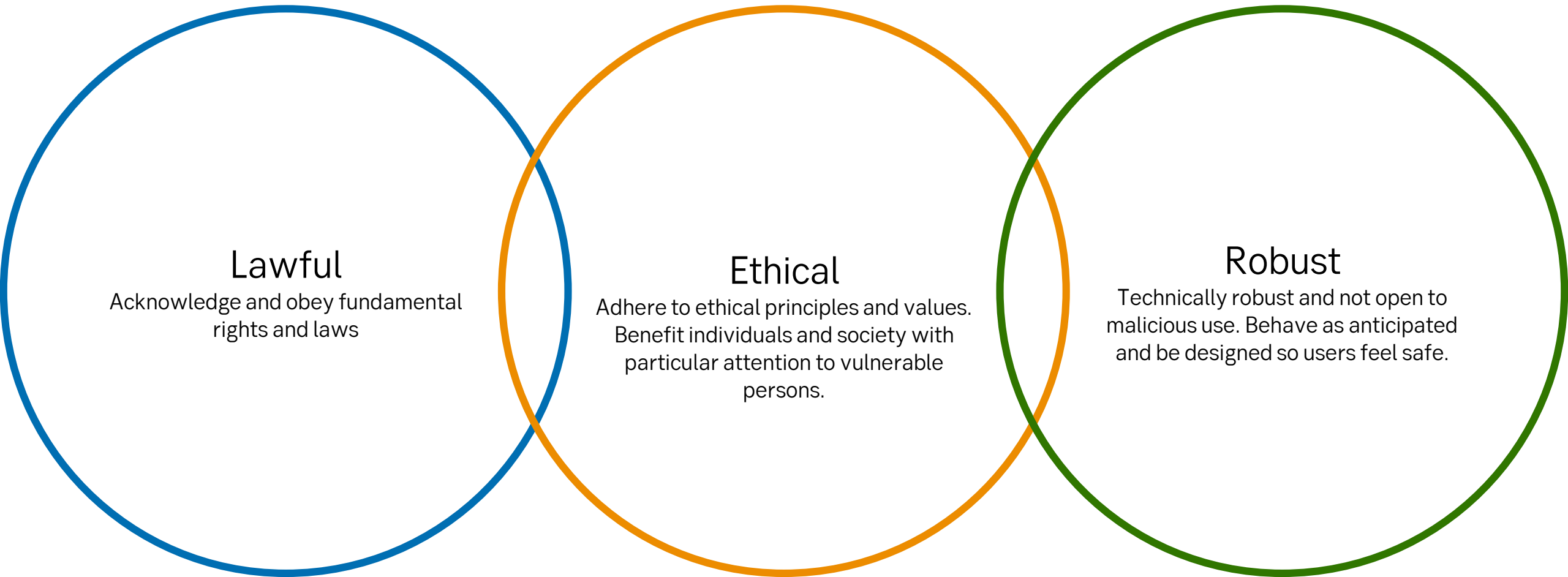
Artificial intelligence & data

Open Banking

Cloud, blockchain & robotics

Cyber risk tech

Responsible AI



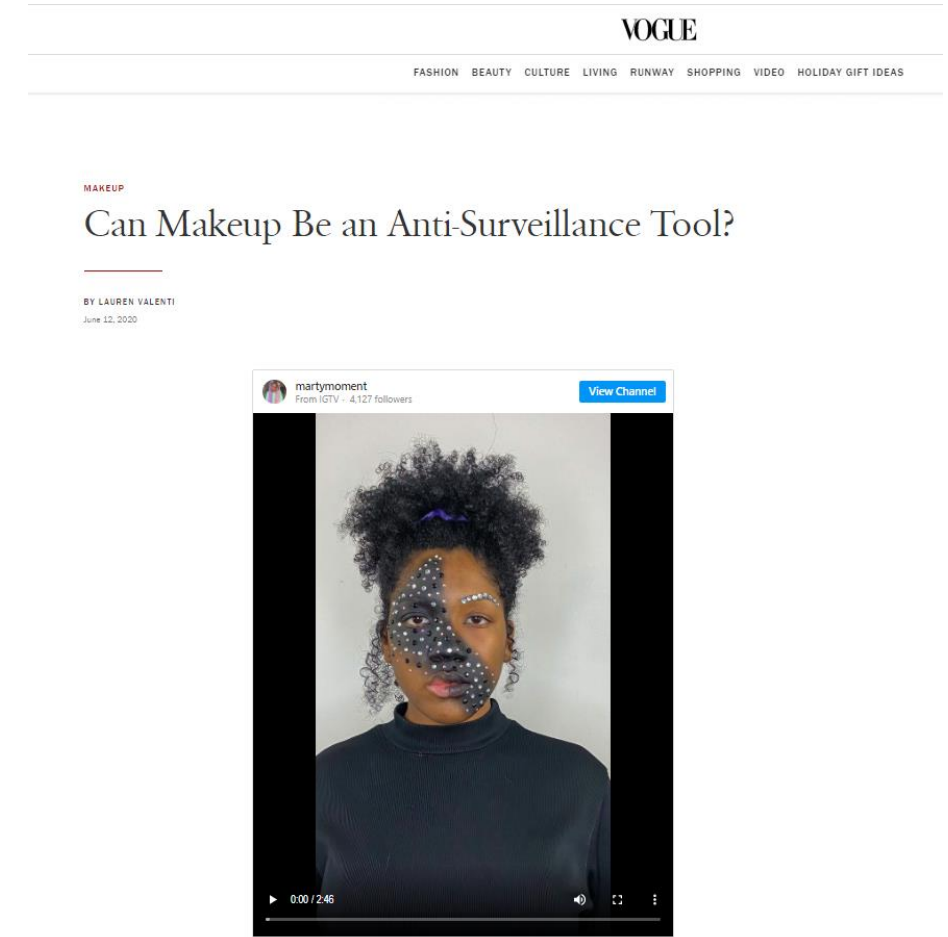
Ethical principles

Not all ethical principles can be satisfied simultaneously, so tradeoffs between principles/values are common.

Examples:

- Surveillance cameras: Privacy vs. Safety
- Gene banks: societal benefits vs. personal cost (privacy, security)
- Hate speech on social media: freedom of speech vs. protection from harm

Tradeoffs depend on context, culture, values and prior experience. There are always positive benefits and potential negative outcomes for any solution.



AI in financial services

The bad



DHH  @dhh · Nov 7, 2019

The [@AppleCard](#) is such a fucking sexist program. My wife and I filed joint tax returns, live in a community-property state, and have been married for a long time. Yet Apple's black box algorithm thinks I deserve 20x the credit limit she does. No appeals work.

 1.4K

 12.8K

 28.6K



[Show this thread](#)

The bad



DHH ✓ @dhh · Nov 9, 2019



Replying to @dhh

So nobody understands THE ALGORITHM. Nobody has the power to examine or check THE ALGORITHM. Yet everyone we've talked to from both Apple and GS are SO SURE that THE ALGORITHM isn't biased and discriminating in any way. That's some grade-A management of cognitive dissonance.



DHH ✓
@dhh

Apple has handed the customer experience and their reputation as an inclusive organization over to a biased, sexist algorithm it does not understand, cannot reason with, and is unable to control. When a trillion-dollar company simply accepts the algorithmic overlord like this...

12:29 AM · Nov 9, 2019



4.3K 572 people are Tweeting about this



Dave Edwards @dedwards93 · Nov 9, 2019



Replying to @dhh and @AppleCard

As a former senior Apple employee, this @applecard issue is very disappointing to me. I feel betrayed. Apple is positioned as the good team in tech. And I believe they are. But this is an issue that they have to fix. They have to think different and be better.



Steve Wozniak ✓
@stevewoz

I'm a current Apple employee and founder of the company and the same thing happened to us (10x) despite not having any separate assets or accounts. Some say the blame is on Goldman Sachs but the way Apple is attached, they should share responsibility.

8:06 AM · Nov 10, 2019



3K 569 people are Tweeting about this

What went wrong?

AI vs the law

The statute provides that its purpose is to require financial institutions and other firms engaged in the extension of credit to “make credit equally available to all creditworthy customers without regard to sex or marital status.” Moreover, the statute makes it unlawful for “any creditor to discriminate against any applicant with respect to any aspect of a credit transaction (1) on the basis of race, color, religion, national origin, sex or marital status, or age (provided the applicant has the capacity to contract); (2) because all or part of the applicant’s income derives from any public assistance program; or (3) because the applicant has in good faith exercised any right under the Consumer Credit Protection Act.” The ECOA has two principal theories of liability: disparate treatment and disparate impact. Disparate treatment occurs when a creditor treats an applicant differently based on a prohibited basis such as race or national origin.² Disparate impact occurs when a creditor employs facially neutral policies or practices that have an adverse effect or impact on a member of a protected class unless it meets a legitimate business need that cannot reasonably be achieved by means that are less disparate in their impact.³



Chinese court names and shames debtors in warm-up to Avengers movie

- Public service message played in cinemas reveals amounts owed by 60 people
- Short film is latest step in campaign that has been running for the past year



Phoebe Zhang

Published: 2:46pm, 25 Apr, 2019 ▾

 [Why you can trust SCMP](#)

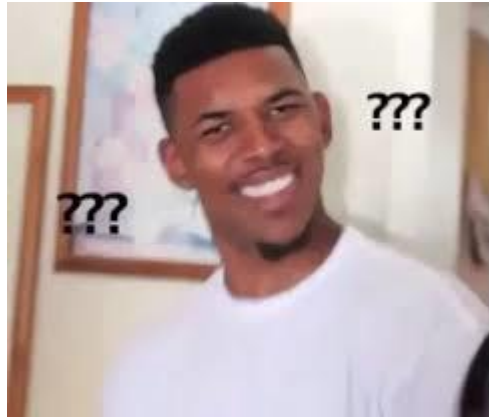
What do we like/dislike about this?

The good?

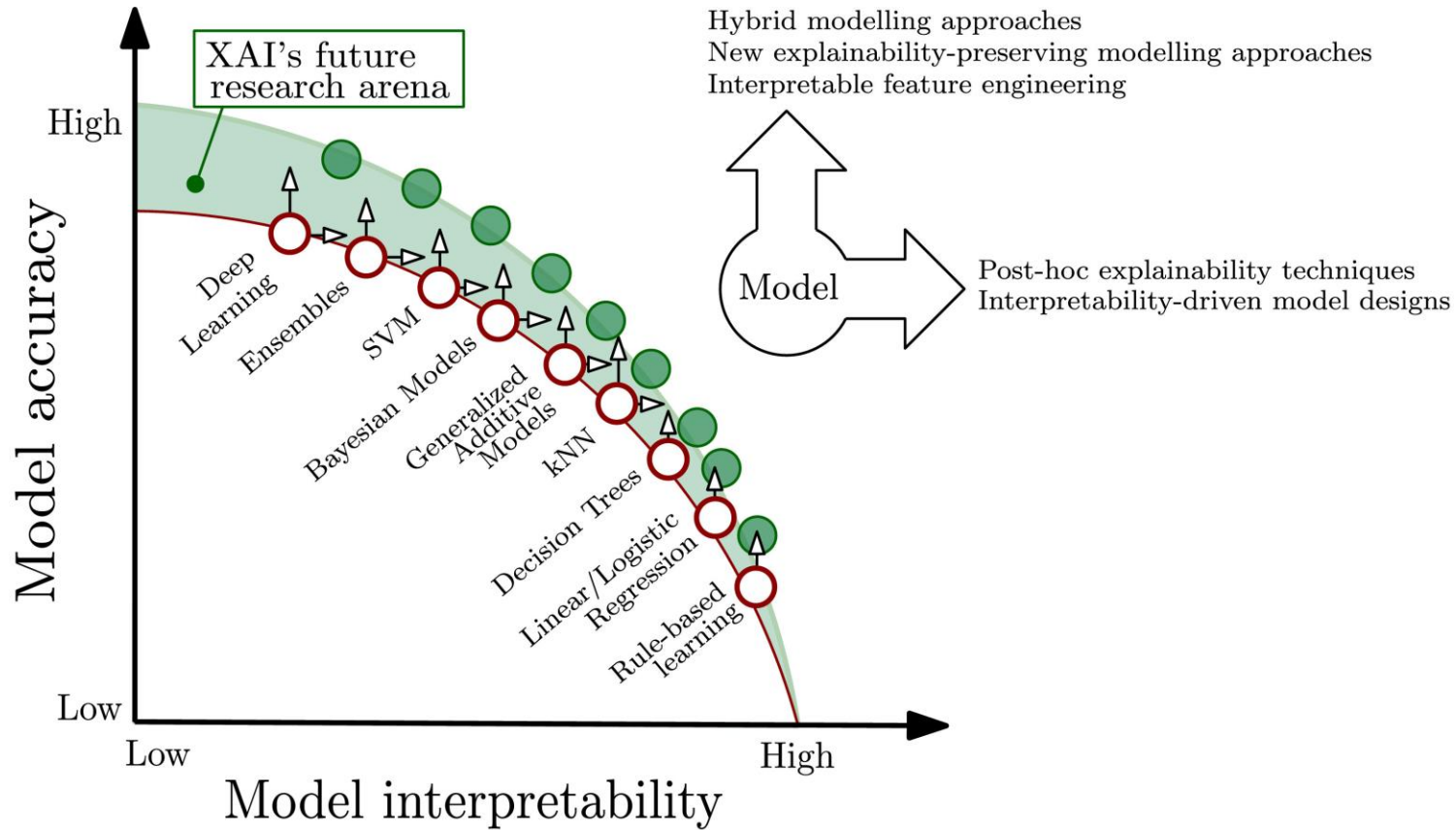
Transparent credit cards are specifically designed to offer cardholders a variety of benefits, including freedom from fees, transparency in terms and conditions, rewards, and other perks. Some are made with clear plastic, showing the actual circuitry of the chip and other elements usually hidden by opaque plastics.

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Explainability



Explainability comes at a price: **accuracy**

How to decide what is more important (transparency/ explainability or accuracy) depends on the context:

- credit scoring
- cancer detection
- self-driving cars

The better – design for transparency

Data

What data is used?
How was it collected?
How is it governed?
How does it fit the context of use?

Design processes

What are the assumptions?
How is the data processed?
What features are chosen or not chosen and why?

Algorithms

What algorithms are used?
How do they come to a particular decision?
For what decision criteria is the model optimized?
Is that justified given the context?

Stakeholders

Who is involved in the process?
What are their interests?
Who will be affected?
Who are the users?
Is participation voluntary?
Who is controlling?

Thank you!