

Ethics

17-313 Fall 2024

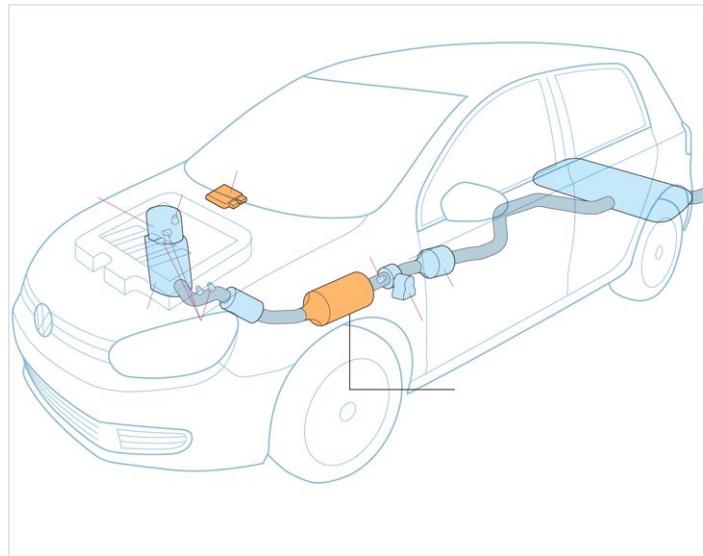
Foundations of Software Engineering

<https://cmu-17313q.github.io>

Eduardo Feo Flushing

Volkswagen Scandal

VW was caught cheating on emissions for Diesel engines



<https://www.nytimes.com/interactive/2015/business/international/vw-diesel-emissions-scandal-explained.html?mtref=www.google.com&assetType=REGIWALL>

Terminology: Legal vs Ethical

- **Legal:** in accordance to societal laws
 - systematic body of rules governing society; set through government
 - punishment for violation
- **Ethical:** following moral principles of tradition, group, or individual
 - branch of philosophy, science of a standard human conduct
 - professional ethics = rules codified by professional organization
 - no legal binding, no enforcement beyond "shame"
 - high ethical standards may yield long term benefits through image and staff loyalty

Disclaimer:

Legality is obviously a locale-specific concern.

What is ethical (and how we know) is a very complicated question.

Whether there exists ground-truth ethics is a point of philosophical debate.

Often informed by context/culture/etc.

What is Human Flourishing?

According to Harvard's Human flourishing program: Human flourishing is composed of five central domains: **happiness and life satisfaction, mental and physical health, meaning and purpose, character and virtue, and close social relationships.**

Activity

In groups of 3-4, describe two unethical situations related to Software Engineering

Outline

- Some (bad) examples of ethics in software engineering
- Do we need (can we have) a Software Engineering Code of Ethics?
- Three questions to promote human flourishing
 - Does my software respect the humanity of the users?
 - Does my software amplify positive behavior, or negative behavior for users and society at large?
 - Will my software's quality impact the humanity of others?

80 ▾

EA calls its loot boxes ‘surprise mechanics,’ says they’re used ethically

‘People like surprises,’ executive tells UK Parliament

By Ana Diaz | @AnaLikesPikachu | Jun 21, 2019, 9:10am EDT

f t SHARE



Domino's Would Rather Go to the Supreme Court Than Make Its Website Accessible to the Blind

Rather than developing technology to support users with disabilities, the pizza chain is taking its fight to the top

by Brenna Houck | @EaterDetroit | Jul 25, 2019, 6:00pm EDT

f t  SHARE



Some airlines may be using algorithms to split up families during flights

Your random airplane seat assignment might not be random at all.

By Aditi Shrikant | aditi@vox.com | Nov 27, 2018, 6:10pm EST



Passengers boarding a Boeing aircraft of the low cost airline carrier Ryanair in Thessaloniki Macedonia Airport, Greece. | Nicolas Economou/NurPhoto/Getty Images

Open Intellectual Property Concerns

- Was the data used to train these LLMs obtained illegally?
- Who owns the IP associated with LLM outputs?
- Should sensitive information be provided as inputs to LLMs?

ARTIFICIAL INTELLIGENCE / TECH / LAW

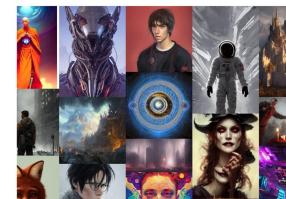
The lawsuit that could rewrite the rules of AI copyright



Microsoft, GitHub, and OpenAI are being sued for allegedly violating copyright law by reproducing open-source code using AI. But the suit could have a huge impact on the wider world of artificial intelligence.

ARTIFICIAL INTELLIGENCE / TECH / CREATORS

AI art tools Stable Diffusion and Midjourney targeted with copyright lawsuit



The suit claims generative AI art tools violate copyright law by scraping artists' work from the web without their consent.

By James Vincent, a senior reporter who has covered AI robotics, and more for eight years at The Verge.

Jan 16, 2023, 6:26 AM EST | □ 22 Comments / 27 Reactions



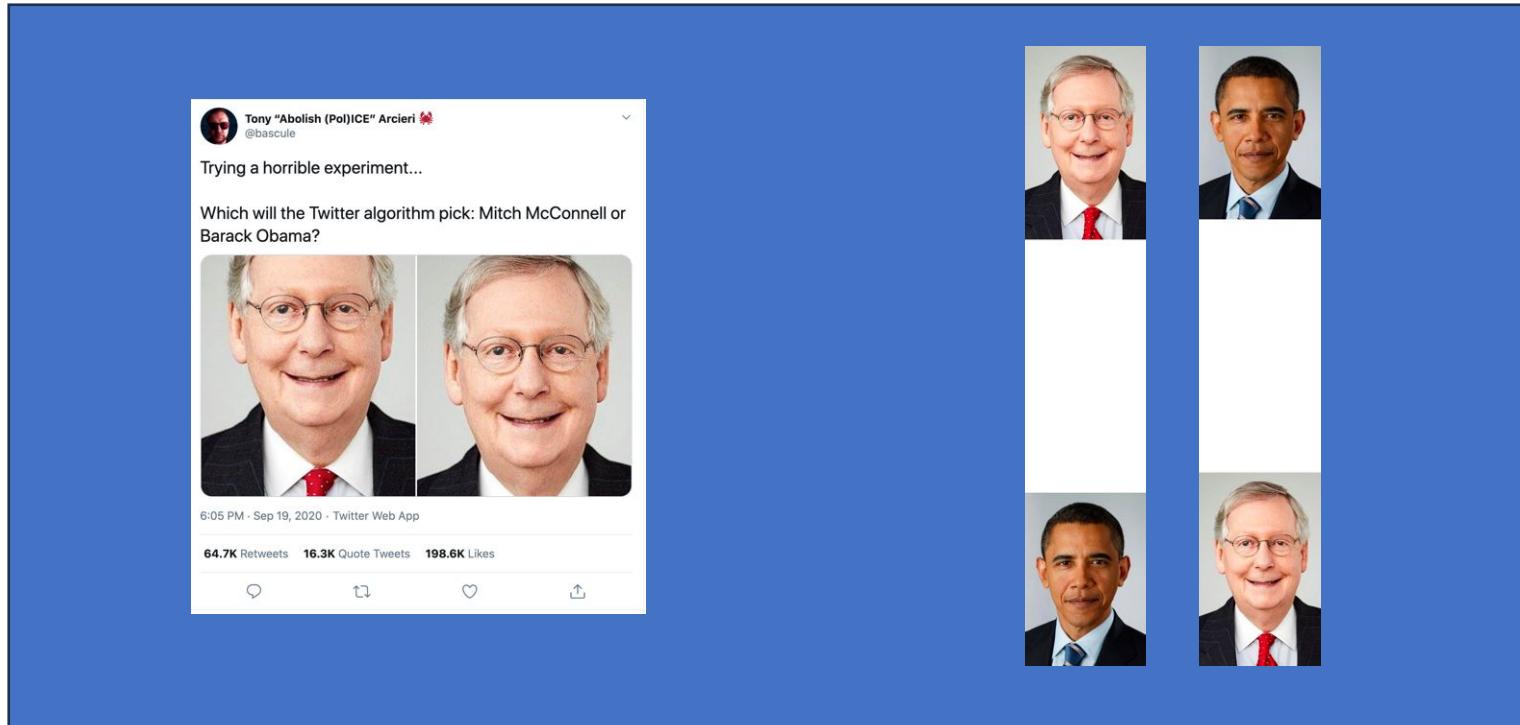
Whoops, Samsung workers accidentally leaked trade secrets via ChatGPT

ChatGPT doesn't keep secrets.

By Cecily Mauron on April 6, 2023



Twitter cropping photos



Twitter cropping photos

The image shows two screenshots from the Twitter web app. The left screenshot displays a tweet from Tony "Abolish (Pol)ICE" Arcieri (@bascule) at 6:05 PM on Sep 19, 2020. The tweet reads: "Trying a horrible experiment... Which will the Twitter algorithm pick: Mitch McConnell or Barack Obama?" It includes two side-by-side profile pictures: one of Mitch McConnell and one of Barack Obama. The right screenshot shows a reply from TheArtGun COMMS OPEN (@TheArtGun) at 10:36 PM on Sep 19, 2020, replying to @bascule. The reply reads: "What if we adjust the contrast" and includes two side-by-side profile pictures where the contrast has been adjusted, making one person's skin tone darker than the other.

Tony "Abolish (Pol)ICE" Arcieri
@bascule

Trying a horrible experiment...

Which will the Twitter algorithm pick: Mitch McConnell or Barack Obama?

6:05 PM · Sep 19, 2020 · Twitter Web App

64.7K Retweets 16.3K Quote Tweets 198.6K Likes

TheArtGun COMMS OPEN
@TheArtGun

Replying to @bascule

What if we adjust the contrast

10:36 PM · Sep 19, 2020 · Twitter Web App

35 Retweets 5 Quote Tweets 102 Likes



r/ChatGPT • 5 mo. ago
Puzzleheaded_Spot401

Google Gemini tried to kill me.

Can I infuse garlic into olive oil without heating it up?

Show drafts

Yes, you can infuse garlic into olive oil without heating it. It will take longer than the heating method, but the process is simple:

- 1. Prepare the garlic:** Peel and lightly crush several garlic cloves. The amount depends on your desired flavor intensity.
- 2. Combine with olive oil:** Place the garlic cloves in a clean glass jar or bottle and pour your desired amount of olive oil over them, ensuring they are fully submerged.
- 3. Infuse:** Seal the container tightly and let it sit at room temperature for about a week. You can occasionally shake the jar to help distribute the garlic flavor.
- 4. Strain:** After a week, strain the oil through a cheesecloth or fine-mesh sieve to remove the garlic pieces.
- 5. Store:** Transfer the infused olive oil to a clean bottle or jar and store it in a cool, dark place. It should last for several weeks.

This method allows the garlic to slowly release its flavors into the oil without the risk of burning or altering the taste.

Like Dislike Edit Reply

Open Source Maintainers

Owner ...

Owner ...

Owner ...

Owner ...

Owner ...

There is a huge difference between not maintaining a repo/package, vs giving it away to a hacker (which actually takes more effort than doing nothing), then denying all responsibility to fix it when it affects millions of innocent people.

884 162 7 16 18

Uber self-driving car involved in fatal crash couldn't detect jaywalkers

The system had several serious software flaws, the NTSB said.



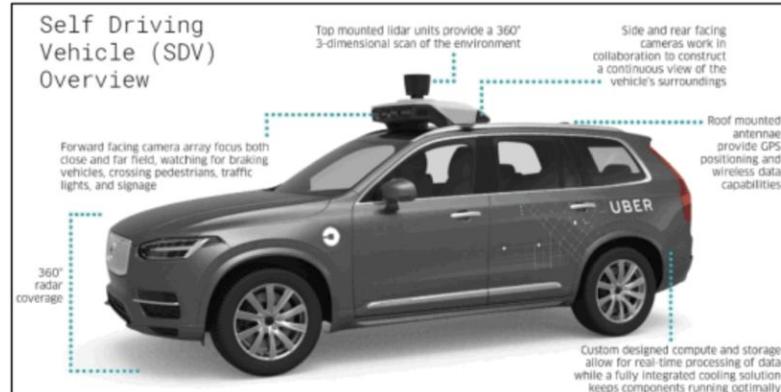
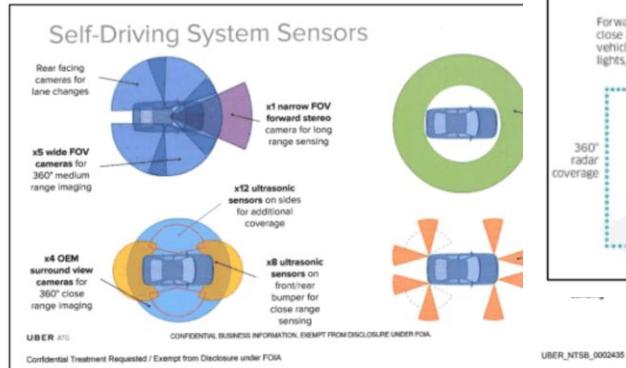
Steve Dent, @stevedent
11.06.19 in [Transportation](#)

25

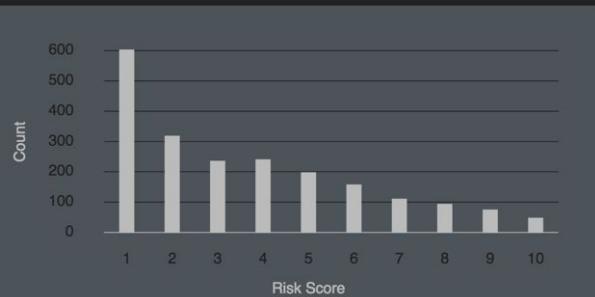
Comments

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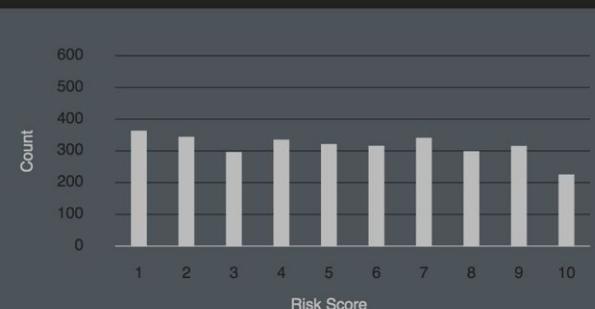
Shares



White Defendants' Risk Scores



Black Defendants' Risk Scores



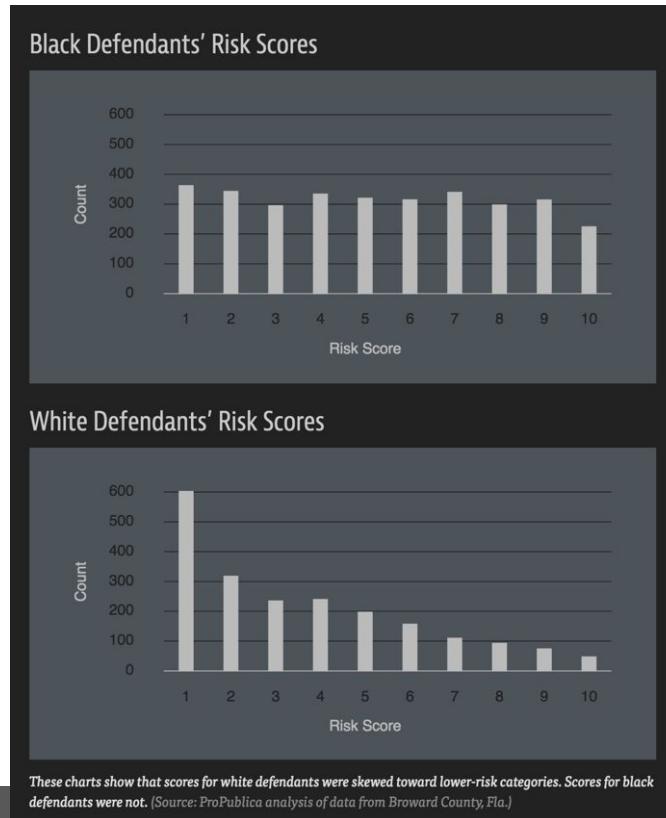
These charts show that scores for white defendants were skewed toward lower-risk categories. Scores for black defendants were not. (Source: ProPublica analysis of data from Broward County, Fla.)

Prediction Fails Differently for Black Defendants

	WHITE	AFRICAN AMERICAN
Labeled Higher Risk, But Didn't Re-Offend	23.5%	44.9%
Labeled Lower Risk, Yet Did Re-Offend	47.7%	28.0%

Algorithmic Bias

Algorithms affect:
Where we go to school
Access to money
Access to health care
Receiving parole
Possibility of Bail
Risk Scores

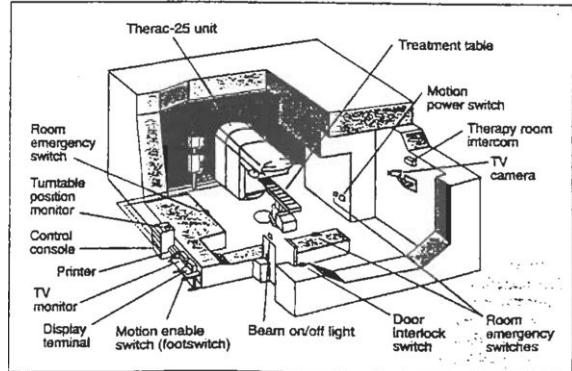


Therac-25

Bug (race-condition) in software lead to at least 6 deaths

- Lack of reporting bugs
- Lack of proper due diligence
- Engineers were overconfident, removed hardware locks

“The Therac-25 incident involved what has been called one of the worst computer bugs in history (Lynch 2017)... Therac-25 is a glaring example of what can go wrong in a society that is heavily dependent on technology.”



PATIENT NAME:	John	TREATMENT MODE:	FIX	BEAM TYPE:	E	ENERGY (MeV):	10
UNIT RATE/MINUTE	0.000000	ACTUAL	0.000000	PREScribed	0.000000		
MONITOR UNITS	200.000000		200.000000		200.000000		
TIME(MIN)	0.270000		0.270000		0.270000		
SANTRY ROTATION (DEG)	0.000000		0.000000		0.000000		VERIFIED
COLLIMATOR ROTATION (DEG)	355.200000		355.300000		355.300000		VERIFIED
COLLIMATOR X (CM)	14.200000		14.200000		14.200000		VERIFIED
COLLIMATOR Y (CM)	27.200000		27.200000		27.200000		VERIFIED
WEDGE NUMBER	1.000000		1.000000		1.000000		VERIFIED
ACCESSORY NUMBER	0.000000		0.000000		0.000000		VERIFIED
DATE: 2012-04-16		SYSTEM: BEAM READY		OP.MODE: TREAT		AUTO	
TIME: 11:18:18		TREAT: TREAT PAUSE		X-RAY			
GSR ID: 013-efslp		REASON: OPERATOR		COMMAND: 1		173777	

<https://www.bugsnag.com/blog/bug-day-race-condition-therac-25/>

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The Guardian view Columnists Letters Opinion video

Engineering
Opinion

As engine ethical
Abbas J

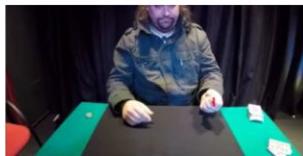
DEV GUEST

Software developers nobody

OLGA V. MACK @OLGAVMACK JUNE 1, 2019 2:22 PM



MOST READ



Researchers attempt to fool AI with magic tricks

4,331 views | Oct 17, 2018, 06:13pm

We Need To Work Harder To Make Software Engineering More Ethical



Jessica Baron Contributor

Consumer Tech

I write about the ethics of science and technology.



Software engineers need a Course in Ethics



With a few lines of code...

Developers have substantial power in shaping products, and software has substantial power over human lives.

Small design decisions can have substantial impact (safety, security, discrimination, ...) -- not always deliberate

Our view: We have both legal & ethical responsibilities to anticipate mistakes, think through their consequences, and build in mitigations!

Do we need (can we have) a
Software Engineering Code
of Ethics?

Engineering ethics.

Ethics applies and is formalized in many professional fields: medical, legal, business, and engineering.

The first codes of engineering ethics were formally adopted by American engineering societies in 1912-1914. In 1946 the National Society of Professional Engineers (NSPE) adopted their first formal Canons of Ethics.

Code of Ethics



Association for
Computing Machinery

As an ACM member I will

Contribute to society and human well-being.

Avoid harm to others.

Be honest and trustworthy.

Be fair and take action not to discriminate.

Honor property rights including copyrights and patent.

Give proper credit for intellectual property.

Respect the privacy of others.

Honor confidentiality.

Code of Ethics

Research shows that the code of ethics does not appear to affect the decisions made by software developers.

Does ACM's Code of Ethics Change Ethical Decision Making in Software Development?

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ABSTRACT

Ethical decisions in software development can substantially impact end-users, organizations, and our environment, as is evidenced by recent ethics scandals in the news. Organizations, like the ACM, publish codes of ethics to guide software-related ethical decisions. In fact, the ACM has recently demonstrated renewed interest in its code of ethics and made updates for the first time since 1992. To better understand how the ACM code of ethics changes software-

The first example is the Uber versus Waymo dispute [26], in which a software engineer at Waymo took self-driving car code to his home. Shortly thereafter, the engineer left Waymo to work for a competing company with a self-driving car business, Uber. When Waymo realized that their own code had been taken by their former employee, Waymo sued Uber. Even though the code was not apparently used for Uber's competitive advantage, the two companies settled the lawsuit for \$245 million dollars.

Professional Ethics

Professional ethics encompass the personal, and corporate standards of behavior expected by professionals.

First three “professions”

- Divinity,
- Law
- Medicine

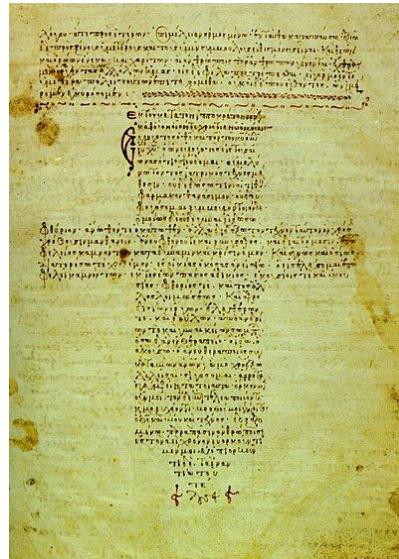


Medicine - Intrinsic

Hippocratic Oath

~450BC

“Do no Harm”



Law -Extrinsic

Bar regulates behavior

Oath to follow rules

Malpractice



Legal Malpractice

Not every mistake is legal malpractice. For malpractice to exist:

Attorney must handle a case inappropriately

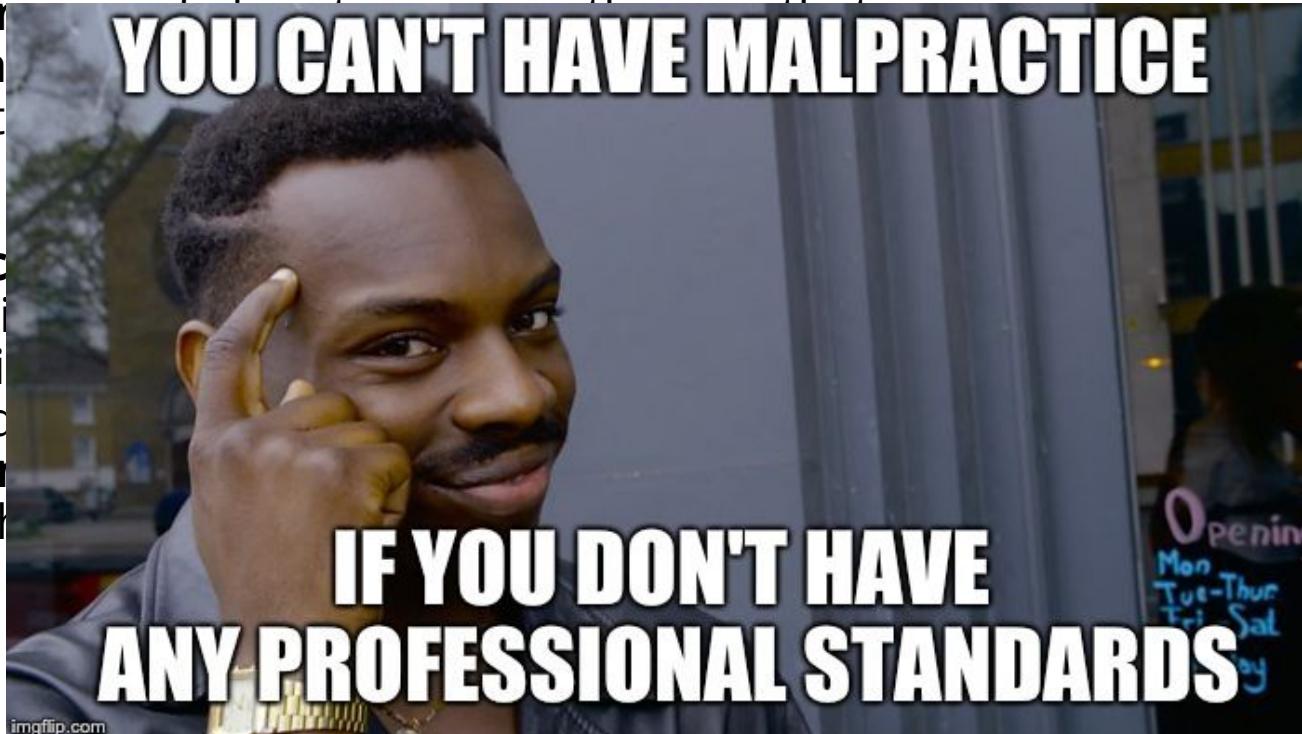
due to negligence or with intent to harm

And cause damages to a client

Negligence vs Malpractice

Negligence
reasonableness
circumstances

Malpractice
"professional
professionals
to provide
governance
causing harm



Challenge:

How do we apply ethics to a field (Software Engineering) that is changes so often?

Can professional standards keep pace with rapid advancements and shifting paradigms?

To handle this uncertainty about the future, let's focus on three questions we can ask to remind ourselves to focus on promoting human flourishing.

Three questions to promote human flourishing

1. Does my software respect the humanity of the users?
2. Does my software amplify positive behavior, or negative behavior for users and society at large?
3. Will my software's quality impact the humanity of others?

1. Does my software respect the humanity
of the users?

Humane Design Guide

<http://humanetech.com>

Humane Design Guide (Alpha Version)

Use this worksheet to identify opportunities for Humane Technology.			What are Human Sensitivities?	
Human Sensitivity	We are inhibited when	What inhibits	We are supported when	Opportunity to improve
Emotional How we feel in our body and in our physical health.	We are stressed, low on sleep, afraid or emotionally exhausted.	<ul style="list-style-type: none">Artificial scarcityUrgency signalingConstant monitoringOptimizing for screentime	Design engenders calm, balance, safety, pauses and supports circadian rhythms.	<input type="radio"/> High <input type="radio"/> Low
Attention How and where we focus our attention.	Attention is physiologically drawn, overwhelmed or fragmented.	<ul style="list-style-type: none">Constant context switchingMany undifferentiated choicesFearful informationNo stopping cues (e.g. infinite scroll)Unnecessary movement	Enabled to bring more focus and mindfulness.	<input type="radio"/> <input type="radio"/> <input type="radio"/>
Sensemaking How we integrate what we sense with what we know.	Information is fear-based, out of context, confusing, or manipulative.	<ul style="list-style-type: none">Facts out of contextOver-personalized filtersEqualizing virality with credibilityDeceptive authority (ads vs. content)	Enabled to consider, learn, express and feel grounded.	<input type="radio"/> <input type="radio"/> <input type="radio"/>
Decisionmaking How we align our actions with our intentions.	Intentions and agency are not solicited nor supported.	<ul style="list-style-type: none">Avatars to convey authorityStalking ads and messagesPush content modelsServing preference over intent	Enabled to gain agency, purpose, and mobilization of intent.	<input type="radio"/> <input type="radio"/> <input type="radio"/>
Social Reasoning How we understand and navigate our personal relationships.	Status, relationships or self-image are manipulated.	<ul style="list-style-type: none">Quantified social statusViral sharingImplied obligationEnabling impersonation	Enabled to connect more safely and authentically with others.	<input type="radio"/> <input type="radio"/> <input type="radio"/>
Group Dynamics How we navigate larger groups, status, and shared understanding.	Excluded, divided or mobilized through fear.	<ul style="list-style-type: none">Suppressing views and nuanceEnabling ad hominem or hate speechEnabling viral outrageLack of agreed-upon norms	Enabled to develop a sense of belonging and cooperation.	<input type="radio"/> <input type="radio"/> <input type="radio"/>

[Center for Humane Technology] www.humanetech.com

Now rank the sensitivities 1-6 based on what you now see as the largest opportunities for Humane Design. Then use the second sheet to develop an action statement. ↑

Humane Design Guide

<http://humanetech.com>

Provides a template for considering a piece of software, and asking questions to help us arrive at a “humane design”

Consider 6 human sensitivities: **Emotional, Attention, Sense making, Decision making, Social Reasoning, and Group Dynamics**

Human Sensitivity	We are inhibited when	What inhibits	We are supported when	Opportunity to improve
Attention How and where we focus our attention.	Attention is physiologically drawn, overwhelmed or fragmented.	<ul style="list-style-type: none">Constant context switchingMany undifferentiated choicesFearful informationNo stopping cues (e.g. infinite scroll)Unnecessary movement	Enabled to bring more focus and mindfulness.	

Identify Opportunities to improve:

In what ways does your product/feature currently engage Human Sensitivities?

How might your product/feature support or elevate human sensitivities?

Action Statement

Humane Design Guide

<http://humanetech.com>

After analysis step, develop plan of action:

1. In what ways does your product/feature currently engage Human Sensitivities?
2. How might your product/feature support or elevate human sensitivities?
3. Action Statement

Human Sensitivity	We are inhibited when	What inhibits	We are supported when	Opportunity to improve
Attention How and where we focus our attention.	Attention is physiologically drawn, overwhelmed or fragmented.	<ul style="list-style-type: none">• Constant context switching• Many undifferentiated choices• Fearful information• No stopping cues (e.g. infinite scroll)• Unnecessary movement	Enabled to bring more focus and mindfulness.	

GenderMag

<https://gendermag.org>

Abby Jones¹



You can edit anything in blue print.

- 28 years old
- Employed as an Accountant
- Lives in Cardiff, Wales

Abby has always liked music. When she is on her way to work in the morning, she listens to music that spans a wide variety of styles. But when she arrives at work, she turns it off, and begins her day by scanning all her emails first to get an overall picture before answering any of them. (This extra part takes time but seems worth it.) Some nights she exercises or stretches, and sometimes she likes to play computer puzzle games like Sudoku.

Background and skills

Abby works as an accountant. She is comfortable with the technologies she uses regularly, but she just moved to this employer 1 week ago, and [their software systems are new to her](#).

Abby says she's a "numbers person," but she has never taken any computer programming or IT systems classes. She [likes Math](#) and knows how to think with numbers. She writes and edits spreadsheet formulas in her work.

In her free time, she also [enjoys working with numbers and logic](#). She especially likes working out puzzles and puzzle games, either on paper or on the computer.

Motivations and Attitudes

- **Motivations:** Abby uses technologies to accomplish her tasks. She learns new technologies if and when she needs to, but prefers to use methods she is [already familiar and comfortable with](#) to keep her focus on the tasks she cares about.

- **Computer Self-Efficacy:** Abby has [low confidence about doing unfamiliar computing tasks](#). If problems arise with her technology, she often blames herself for these problems. This affects whether and how she will persevere with a task if technology problems have arisen.

- **Attitude toward Risk:** Abby's life is a little complicated and she [rarely has spare time](#). So she is [risk averse about using unfamiliar technologies that might need her to spend extra time](#) on them, even if the new features might be relevant. She instead performs tasks using familiar features, because they're more predictable about what she will get from them and how much time they will take.

How Abby Works with Information and Learns:

- **Information Processing Style:** Abby tends towards a comprehensive [information processing style](#) when she needs to learn more information. So, instead of acting upon the first option that seems promising, she [gathers information comprehensively to try to form a complete understanding of the problem before trying to solve it](#). Thus, her style is "burst-y"; first she reads a lot, then she acts on it in a batch of activity.

- **Learning: by Process vs. by Tinkering:** When learning new technology, Abby leans toward [process-oriented learning](#), e.g., tutorials, step-by-step processes, wizards, online how-to videos, etc. She [doesn't particularly like learning by tinkering with software](#) (i.e., just trying out new features or commands to see what they do), but when she does tinker, it has positive effects on her understanding of the software.

¹Abby represents users with motivations/attitudes and information/learning styles similar to hers. For data on females and males similar to and different from Abby, see <http://eusesconsortium.org/gender/gender.php>

GenderMag

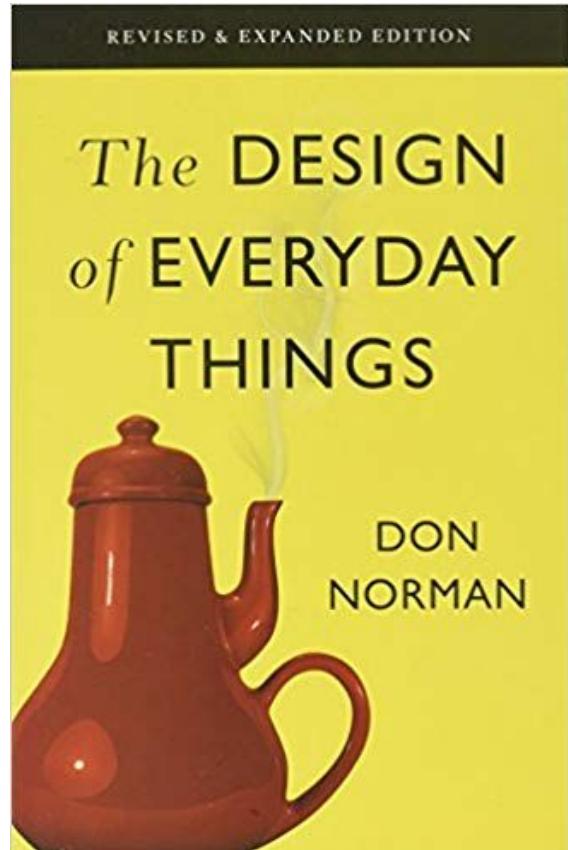
<https://gendermag.org>

<ul style="list-style-type: none">1. Pick a persona. eg: Abby2. Pick a use case/scenario in your tool, eg:<ul style="list-style-type: none">- in Book Store Navigator app...- “Find science fiction books”  	<ul style="list-style-type: none">3a-b. Pick a Subgoal for that scenario. eg: Subgoal #1: “See bookstore map”. Q: Will Abby have formed this sub-goal...?<ul style="list-style-type: none">• Yes/no/maybe.• Why? Consider Abby's Motivations...  
<ul style="list-style-type: none">3c-d. Pick an Action for that subgoal. Action #1: “Tap ‘Browse Off’”:<ul style="list-style-type: none">- Q1. Will Abby know what to do?<ul style="list-style-type: none">• Yes/no/maybe.• Why? Consider Abby's ... Tinkering   <p>First answer Q1. After answering it, then perform the action.</p>	<ul style="list-style-type: none">3e. Q2. If she performs the action, producing will Abby see progress toward the subgoal?<ul style="list-style-type: none">• Yes/no/maybe.• Why? Consider Abby's Self-Efficacy & ...  

User Centered Design

User-centered design tries to optimize the product around how users can, want, or need to use the product, rather than forcing the users to change their behavior to accommodate the product.

-Wikipedia



Agile

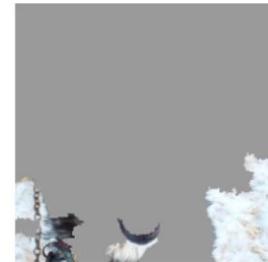


2. Does my software amplify positive or negative behavior for users and society at large?

ML Interpretability: Dog vs Wolf



(a) Husky classified as wolf

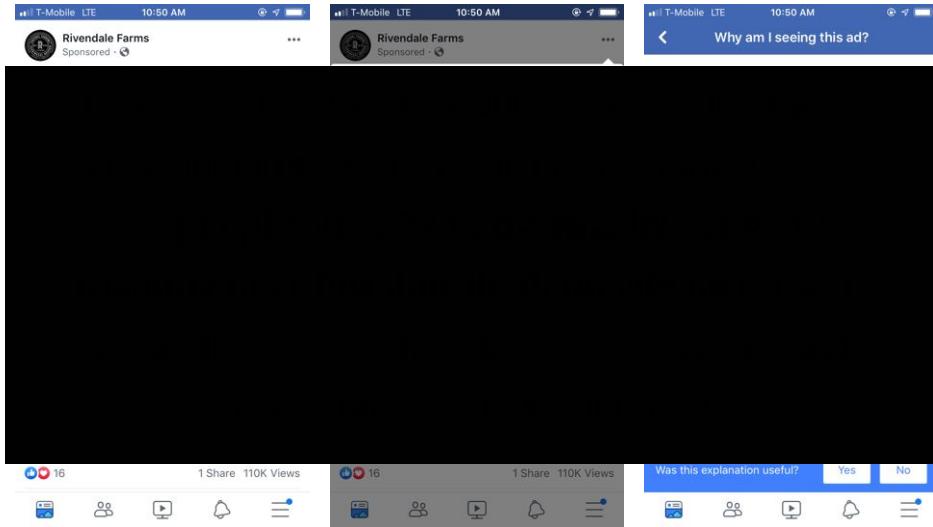


(b) Explanation

Figure 11: Raw data and explanation of a bad model's prediction in the “Husky vs Wolf” task.

	Before	After
Trusted the bad model	10 out of 27	3 out of 27
Snow as a potential feature	12 out of 27	25 out of 27

Explain “why” to customers



Anil Dash on how to prevent abuse

You should have real humans dedicated to monitoring and responding to your community.

You should have community policies about what is and isn't acceptable behavior.

Your site should have accountable identities.

You should have the technology to easily identify and stop bad behaviors.

You should make a budget that supports having a good community, or you should find another line of work.

Deon

<https://github.com/drivendataorg/deon>



tests passing codecov 97% pypi v0.2.2 conda-forge v0.2.2

[Read more about deon on the project homepage](#)

An ethics checklist for data scientists

`deon` is a command line tool that allows you to easily add an ethics checklist to your data science projects. We support creating a new, standalone checklist file or appending a checklist to an existing analysis in [many common formats](#).

δέον • (déon) [n.] (*Ancient Greek*) [wikitionary](#)

Duty; that which is binding, needful, right, proper.

AI Incident Database

The screenshot shows the homepage of the AI Incident Database (AIID) at incidentdatabase.ai. The page features a dark header with a blue AI logo and the text "INCIDENT DATABASE". Below the header, there are two main buttons: "Discover" and "Submit". The main content area has a title "Welcome to the AIID" and a section titled "Why 'AI Incidents'?". This section explains that intelligent systems are prone to unforeseen and dangerous failures when deployed. It compares this to the transportation sector and mentions "computer systems". A sidebar on the right is titled "CONTENTS" and lists several sections: "Why 'AI Incidents'?", "What is an Incident?", "Current and Future Users", and "When Should You Report an Incident?". At the bottom of the main content, there's a note about the initial set of reports being broad in nature.

Welcome to the AIID

Why "AI Incidents"?

Intelligent systems are currently prone to unforeseen and often dangerous failures when they are deployed to the real world. Much like the transportation sector before it (e.g., [FAA](#) and [FARS](#)) and more recently [computer systems](#), intelligent systems require a repository of problems experienced in the real world so that future researchers and developers may mitigate or avoid repeated bad outcomes.

What is an Incident?

The initial set of more than 1,000 incident reports have been intentionally broad in nature. Current examples include,

3. Will my software's quality
impact the humanity of
others?

Quality attributes have long been considered

Quality attributes [edit]

Notable quality attributes include:

- accessibility
- accountability
- accuracy
- adaptability
- administrability
- affordability
- agility [TOI] (see Common Subsets below)
- auditability
- autonomy [Erl]
- availability
- compatibility
- composable [Erl]
- configurability
- correctness
- credibility
- customizability
- debugability
- degradability
- determinability
- demonstrability
- dependability
- deployability
- discoverability [Erl]
- distributability
- durability
- effectiveness
- efficiency
- evolvability
- extensibility
- failure transparency
- fault-tolerance
- fidelity
- flexibility
- inspectability
- installability
- integrity
- interchangeability
- interoperability [Erl]
- learnability
- localizability
- maintainability
- manageability
- mobility
- modifiability
- modularity
- observability
- operability
- orthogonality
- portability
- precision
- predictability
- process capabilities
- productivity
- provability
- recoverability
- relevance
- reliability
- repeatability
- reproducibility
- resilience
- responsiveness
- reusability [Erl]
- robustness
- safety
- scalability
- seamlessness
- self-sustainability
- serviceability (a.k.a. supportability)
- securability
- simplicity
- stability
- standards compliance
- survivability
- sustainability
- tailorability
- testability
- timeliness
- traceability
- transparency
- ubiquity
- understandability
- upgradability
- vulnerability
- usability

Types of Harm on Society

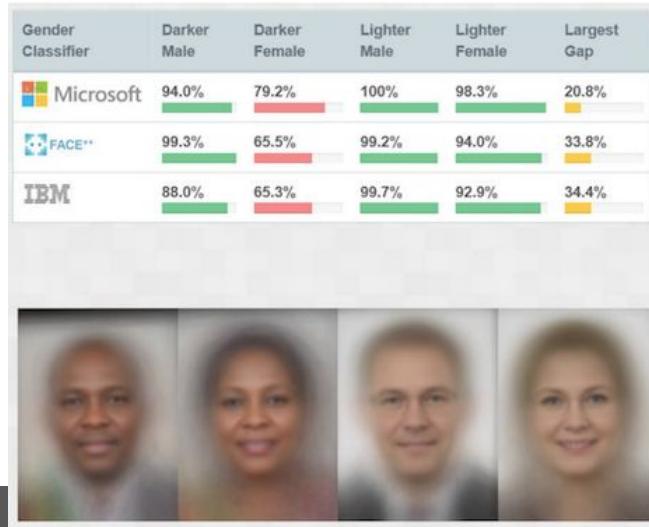
Harms of allocation: Withhold opportunities or resources

Harms of representation: Reinforce stereotypes, subordination along the lines of identity

Harms of Allocation

Withhold opportunities or resources

Poor quality of service, degraded user experience for certain groups



Harms of Representation

- Over/under-representation of certain groups in organizations
- Reinforcement of stereotypes (e.g. Black community & criminality)

Ads by Google

[Latanya Sweeney, Arrested?](#)

1) Enter Name and State. 2) Access Full Background Checks Instantly.
www.instantcheckmate.com/

[Latanya Sweeney](#)

Public Records Found For: Latanya Sweeney. View Now.
www.publicrecords.com/

[La Tanya](#)

Search for La Tanya Look Up Fast Results now!
www.ask.com/La+Tanya

"Racially identifying names" change the ads you get -- names commonly associated with Black individuals were more likely to trigger ads that suggested a criminal background check.

Discrimination in Online Ad Delivery, Latanya Sweeney, SSRN (2013).

These questions are the **start** of the conversation, but as technology evolves, we must be vigilant to ensure we are promoting human flourishing

Three questions to promote human flourishing

1. Does my software respect the humanity of the users?
2. Does my software amplify positive behavior, or negative behavior for users and society at large?
3. Will my software's quality impact the humanity of others?