

WHY SHOULD WE CARE ABOUT TECHNOLOGY ETHICS?

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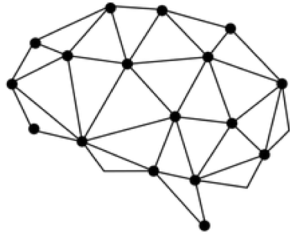


Committee on
Professional Ethics



**DE MONTFORT
UNIVERSITY**
LEICESTER

WHY SHOULD I CARE ABOUT ETHICS?



Cambridge
Analytica



TECHNOLOGY

Amazon, Palantir are aiding mass deportations of govt 'undesirables': report

 **Tim Hinchliffe** · 18 hours ago · no comment · Amazon , aws , deportations , ethics , ICE , immigration , palantir

Google Employees Are Quitting Over The Company's Secretive China Search Project

"If it was true, I was pretty sure immediately I couldn't continue working there," one former employee told BuzzFeed News.

The New York Times

Microsoft Employees Protest Work With ICE, as Tech Industry Mobilizes Over Immigration

Technology

Salesforce Staff Ask CEO to Revisit Ties With Border Agency

Mark Bergen and Nico Grant

25 June 2018, 23:34 BST Updated on 26 June 2018, 00:19 BST



ALL COMPANIES NEED ETHICS

- Ensuring market acceptability (and prevent media backlash)
- Happy employees
- Loyal customers
- Longer term profits
- Making the world a better place for all
- Being able to sleep at night

GENERAL ISSUES WE NEED TO ADDRESS

- Tech has long been seen as a “Wild West” frontier
 - Not particularly regulated
 - Practitioners not needing to be certified (unlike doctors/lawyers/architects/engineers)
- Increasing reliance on computing technology
- Increasing dissatisfaction with technology “giants” and profit-driven tech
- Policy vacuums
- Many unknowns

UK is still considering taxing Facebook to help fight fake news

TECH NEWS

Thursday, 25 Oct 2018

3:31 PM MYT



Facebook and Google are run by today's robber barons. Break them up
Toby Walsh

regulation is needed to make the tech industry act in line with the public good

FINANCIAL TIMES

UK COMPANIES TECH MARKETS OPINION WORK & CAREERS LIFE & ARTS HOW TO SPEND IT

Opinion **Technology sector**

Tame tech and drive innovation towards a fair inclusive society

Britain has the chance to lead and create a resilient system of regulation

MARTHA LANE FOX

+ Add to myFT

UHOH, REGULATION

TECH.CO

Tech Startup News, Events & Resources



NEWS REVIEWS & ADVICE ONLINE SECURITY BUSINESS TECH

Search

Politicians Are Too Out of Touch to Make Laws About Tech

CEO of cloud company Box says tech industry needs '21st-century' regulation

- Box co-founder and CEO Aaron Levie speaks to the importance of data protection and explains his reasons for backing big tech regulation in an interview with CNBC's Jim Cramer.
- Levie tells the "Mad Money" host that Box is "not shying away from regulation."

Elizabeth Gurdus | @lizzygurdus

Published 6:22 PM ET Thu, 27 Sept 2018 | Updated 7:23 PM ET Thu, 27 Sept 2018



ETHICS IS HIP AGAIN

Tech's Ethical 'Dark Side': Harvard, Stanford and Others Want to Address It



Laura Norén, who teaches a data science ethics course at New York University, said, "You can patch the software, but you can't patch a person if you, you know, damage someone's reputation."

Sam Hodgson for The New York Times

By Natasha Singer

Feb. 12, 2018



ARIELLE PARDES GEAR 08.07.18 07:00 AM

SILICON VALLEY WRITES A PLAYBOOK TO HELP AVERT ETHICAL DISASTERS

Forbes

Billionaires Innovation Leadership Money Consumer Industry Lifestyle

1,449 views | Aug 6, 2018, 10:09am

Why Emerging Technology Needs To Retain A Human Element



Samantha Radocchia Contributor ⓘ

Crypto & Blockchain

I'm a blockchain entrepreneur and Co-Founder of Chronicled.



THE BIG QUESTIONS

- Should the IT industry be more heavily regulated?
 - Should IT practitioners require certification?
 - Why are all these groups reinventing the ethics wheel?
-
- How can we design, develop, and deploy our technology responsibly?

RESPONSIBLE INNOVATION

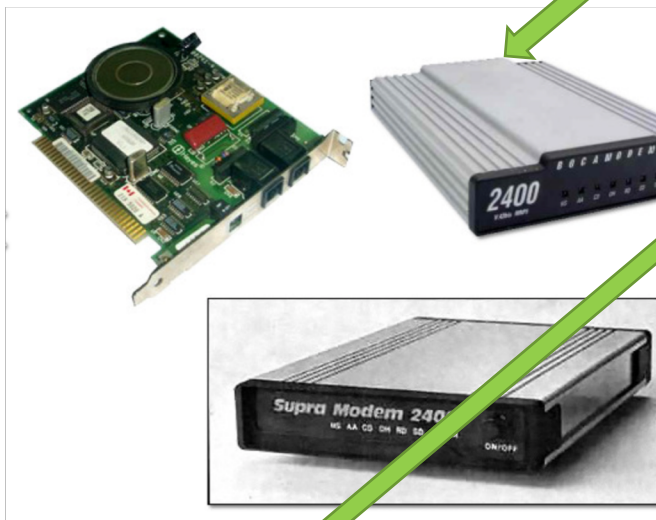
- An umbrella term for:
 - Ethics
 - Sustainability
 - Diversity
 - Open access
 - Public engagement
 - Science education
- **Anticipation:** what might happen in the future with our tech? What social/environmental impacts might our tech have? Use: foresight exercises; misuse cases; “design for evil”; looking beyond the intended use
- **Reflection:** what is our purpose and motivation for developing the tech? What ethical impacts might our tech have? What don’t we usually think about? Use of: standards, codes of ethics, etc.
- **Engagement:** How socially acceptable is the tech? Use of co-creation, user feedback, broader diversity initiatives, dialogues with all stakeholders
- **Action:** how does our workplace support us to be responsible? Look at: HR practice, workflow, project management, decision making, funding

ASSOCIATION OF COMPUTING MACHINERY

- Professional organisation for computing professionals
- >100,000 members
- All kinds of “computing professionals”

“We see a world where computing helps solve tomorrow’s problems – where we use our knowledge and skills to advance the profession and make a positive impact.”

- acm.org front page



World Wide Web is born

First webcam

YAHOO!

ebay

napster

WIKIPEDIA

myspace

Web 2.0 era begins

Spotify

YouTube

Apple iPhone (mobile web)

1990

1991

1992

1993

1994

1995

1996

1997

1998

1999

2000

2001

2002

2003

2004

2005

2006

2007

MP3 becomes a standard

First graphical browser

amazon.com

Weblog term emerges

Google

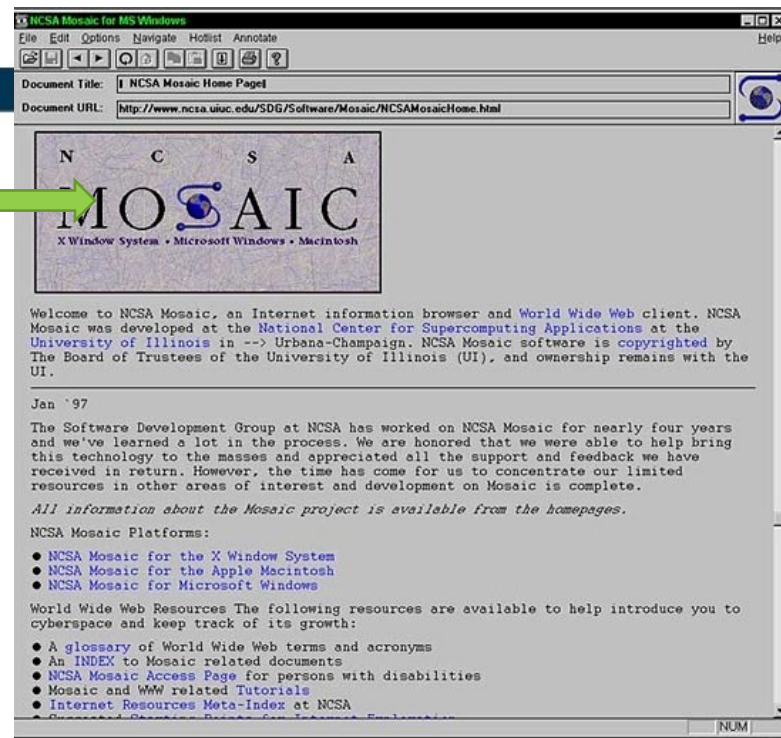
Dot.com bubble bursts

LinkedIn

facebook

twitter

Gmail

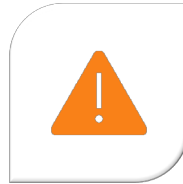


BACK IN 1992...

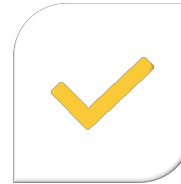
The profession was particularly concerned about

- systems that were physically huge (no cloud!) so physical security
- infrastructure (ok still similar issues)
- data (also similar)
- copyright (no subscription or streaming services or app stores)
- contracts and laws (still important)
- requirements analysis (ok we still do this!)
- continuing professional development (education and training)
- Privacy, dignity, autonomy, trustworthiness, honesty, discrimination, confidentiality (classic ethical issues)

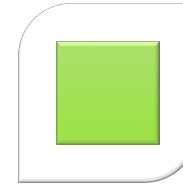
BUT IT WAS
VERY
DATED...



Physical security
no longer the
most pressing
issue



Copyright and
intellectual
property rights
are now far
more complex



Data privacy is
more complex



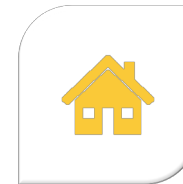
Anti-
discrimination
aspect was
missing a lot of
modern detail



It mentioned
“computer
viruses” and
other 90s jargon



Had an
overbearing
feel and was
very ACM-
specific



It really just
needed to be
updated to suit
modern uses and
abuses of
computing



(also the
enforcement
policy was unfit
for purpose)

SO WHAT DID WE DO?

- Three drafts, with public, expert, and ACM member input
 - Including a discussion forum (draft 2) and survey sent to all 100,000 members (draft 3)
 - Anyone who has done qualitative data analysis will know how hard it is to analyse roughly 5,000x27 short answer qualitative responses
- Spent weekends in Chicago taking the feedback and creating new drafts



Left to right: Marty Wolf, Keith Miller, Don Gotterbarn, Bo Brinkman (and me taking the photo!)

SOME MAJOR CHANGES: COPYRIGHT

- 1992: Honor property rights including copyrights and patents.
- 2018: 1.5 Respect the work required to produce new ideas, inventions, creative works, and computing artifacts.
- Also suggests open access & open source contributions, and protecting work put into the public domain



SOCIAL MEDIA, APP STORES, UBER, ETC.

- 1992
- (*tumbleweed*)
- 2018: 3.7 Recognize and take special care of systems that become integrated into the infrastructure of society.
- “Part of that stewardship requires establishing policies for fair system access, including for those who may have been excluded. ”



PARAMOUNT CONCERN

- 1992 2.1 Strive to achieve the highest quality, effectiveness and dignity in both the process and products of professional work.

Excellence is perhaps the most important obligation of a professional.

- 2018 3.1 Ensure that the public good is the central concern during all professional computing work.



PROFESSIONALS SHOULD REFLECT ON ETHICAL CHALLENGES, NOT JUST COMPETENCE

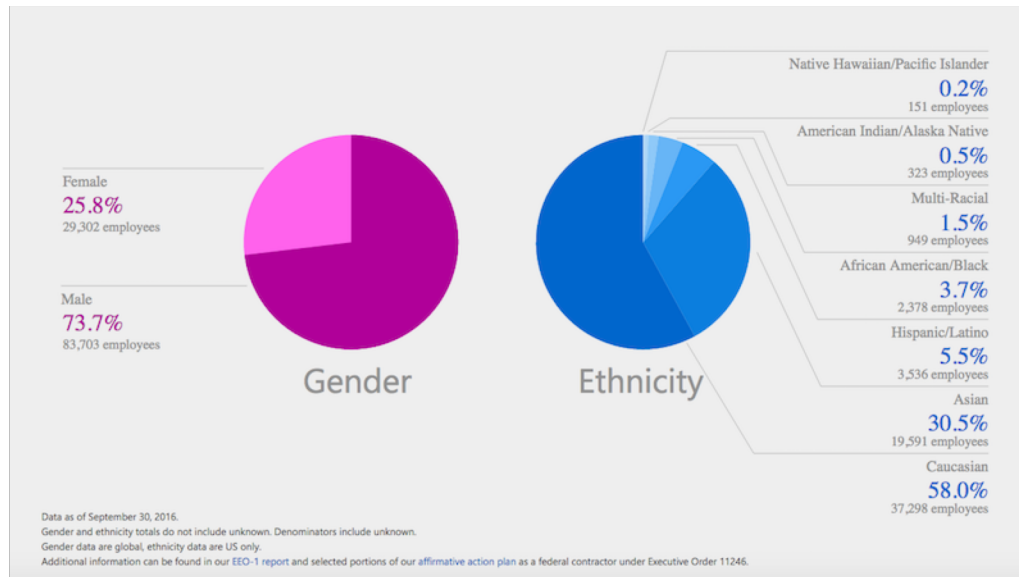
- 1992 2.2 Acquire and maintain professional competence.
- “A professional must participate in setting standards for appropriate levels of competence, and strive to achieve those standards.”
- (basically *tumbleweed*)
- 2018 2.2 Maintain high standards of professional competence, conduct, and ethical practice.
- “Professional competence starts with technical knowledge and with awareness of the social context in which their work may be deployed. Professional competence also requires skill in communication, in reflective analysis, and in recognizing and navigating ethical challenges.”

USING THE CODE

- The ACM Code of Ethics is an excellent tool for reflection
- It needs to be used holistically, not just read once and job done
- Any technology, dilemma, major decision, method, etc. can be carefully considered alongside the Code.
- If you are an ACM member you have agreed to abide by the Code



DIVERSITY



Microsoft gender/ethnicity breakdown, 2016

- How to deal with diversity?
- 1.4 Be fair and take action not to discriminate
- 2.2 Maintain high standards of professional competence, conduct, and ethical practice
- 2.7 Foster public awareness and understanding of computing, related technologies, and their consequences.

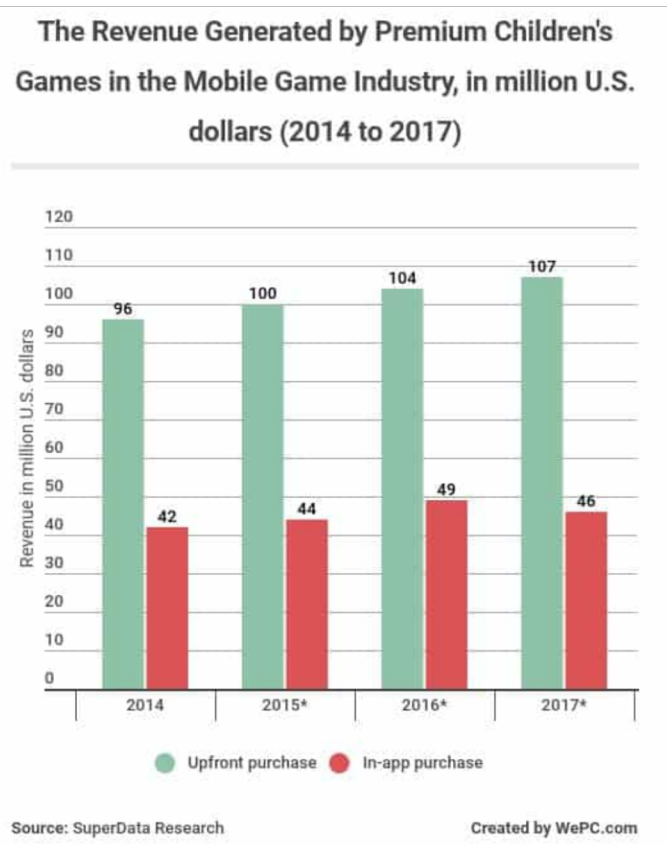


DATA ANALYTICS AND MACHINE LEARNING



- 1.4 Be fair and take action not to discriminate
- 1.6 Respect privacy
- 1.7 Honour confidentiality
- 2.1 Strive to achieve high quality in both the processes and products of professional work
- 2.5 Give comprehensive and thorough evaluations of computer systems and their impacts, including analysis of possible risks.
- 3.1 Ensure that the public good is the central concern...

TECH FOR VULNERABLE PEOPLE



- 1.2 Avoid harm
- 1.3 Be honest and trustworthy
- 2.7 Foster public awareness and understanding of computing, related technologies & their consequences
- 2.9 Design and implement systems that are robustly and usably secure

TAKE HOME MESSAGE: RESPONSIBLE INNOVATION

- We can **anticipate** the impacts of the technologies we create
 - Thinking beyond the opportunities that arise and looking at longer term social and ethical impacts
- We can **reflect** on the ethical issues that arise from the technologies
 - Using efforts such as the ACM Code of Ethics, technology assessment, value-sensitive design to guide your work
- We can **engage** with those likely to be affected by the technologies
 - Not just those who will pay for it directly, e.g. power users or shareholders
- We can ensure we **act** on these by having good business processes in place that promote ethical thinking
 - E.g. Responsible Innovation practices, codes of practice, value statements

MORE INFORMATION

- ACM Code of Ethics & Committee on Professional Ethics site: <https://ethics.acm.org>
- Responsible Innovation Compass beta test <https://innovation-compass.eu/self-check/>
- Virtual Summit on responsible innovation in Smart Homes and Smart Health: <https://www.living-innovation.net>
- All of my stuff (research, other weird things) is at <https://www.liedra.net>
- I'm on Twitter @CatherineFlick, COPE is on Twitter @ACM_Ethics

