INTELLIGENCE: BALANCING PROGRESS AND RESPONSIBILITY

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ACCOUNTABILITY

Who is responsible for the actions of Al-powered systems?

AI EVERYWHERE











Search • engines

Influencing our choices and knowledge

Vehicles •

Self-driving cars, plane autopilots

Healthcare •

Diagnosing and suggesting treatment

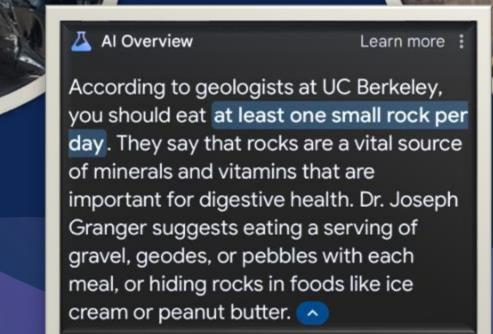
Military •

Autonomous weapons

Content • generation

Al generated texts, images and videos





WHO SHOULD BE ACCOUNTABLE IN SUCH CASES?

- o Developers?
- o Companies?
- o Regulatory authorities?
- o End users?
- o All of them?

2019 TESLA AUTOPILOT CRASH IN KEY LARGO

The crash resulted in the death of 22-year-old Naibel Benavides Leon and serious injury to her boyfriend, Dillon Angulo. The Tesla driver, George McGee, admitted to looking down to retrieve his phone while the car - operating under Autopilot - failed to stop and struck the couple. Tesla claims the driver bore sole responsibility for the accident.

The trial is projected to conclude around July 31st, 2025.

THE DATA PRIVACY DILEMMA

- o Al systems rely on vast amounts of personal data
- o Data collection and usage often lack transparency
- o Risk of data breaches and misuse

DATA PRIVACY IN ACTION

Examples:

- o Social media platforms and targeted advertising
- o Healthcare data collection and usage
- o Facial recognition technology in public spaces

THE ETHICAL IMPLICATIONS

- o Informed consent and data ownership
- o Bias and discrimination in AI decision-making
- o Accountability and transparency in data usage

CURRENT APPROACHES

- o Data protection regulations (e.g., GDPR, CCPA)
- o Anonymization and encryption techniques
- o Industry-led initiatives for responsible AI development

A PATH FORWARD

- o Human-centered Al design
- o Transparency and explainability in Al decision-making
- o Prioritizing data minimization and purpose limitation

THE REWARDS OF RESPONSIBLE AI

- o Increased trust in AI systems
- o Improved decision-making and outcomes
- o Enhanced societal well-being

OVERCOMING OBSTACLES

- o Technical limitations
- o Regulatory complexities
- o Balancing innovation and responsibility

BALANCING PROGRESS AND RESPONSIBILITY

Summary:

- o Data privacy is a critical aspect of AI ethics
- Existing solutions and proposed frameworks can help ensure responsible AI development
- Ongoing dialogue and collaboration are necessary for finding solutions

ALGORITHMIC BIAS

Al training data, algorithms, evaluations and representations with a twist

TYPES OF ALGORITHMIC BIAS

- Selection Bias
- Sampling Bias
- ❖ Labelling Bias
- Confirmation Bias
- Measurement Bias
- ***** Exclusion Bias
- Group Attribution Bias
- ❖ Temporal Bias
- Aggregation Bias





Why Amazon's Automated Hiring Tool Discriminated Against Women

Law enforcement: Predictive policing algorithms can lead to biased practices. For example, algorithms might predict higher crime rates in minority neighborhoods, resulting in over-policing.

Meanwhile, a research study from the University of California, Berkeley showed that an AI mortgage system routinely charged Black and Latinx borrowers higher rates for the same loans compared to their white counterparts. In the public sector, the Los Angeles Homeless Services

Healthcare: All can introduce biases in diagnoses and treatment recommendations. For example, systems trained on data from a single ethnic group might misdiagnose other groups.

Voice recognition: Conversational AI systems can show bias against certain accents or dialects. For example, AI assistants might struggle with non-native speakers or regional accents, reducing usability.

ETHICAL CONSIDER ATIONS

- Autonomy How much is too much?
- Intentionality Moral implications
- Responsibility When and where?
- Accountability Who should take the blame?

- Discrimination All levels
- Loss of Trust Hindering AI solution adoption
- Unequal Opportunity Accessibility Preventing/restricting access for different groups
- Legal and Ethical Organisations using Al without transparency

CURRENT APPROACHES TO MITIGATING ALGORITHMIC BIAS

- oDiverse and Representative Data
- oBias Detection and Correction
- oAlgorithm Transparency
- oHuman Oversight
- oEthical AI Development

Responsibility for Algorithmic Bias involves everyone, from developers to policy makers.

FUTURE DEVELOPMENTS

- o Diversifying Data Practices
- o Improving Algorithm Transparency
 - o Maintaining Human Oversight











AI AND PROVIDING AID IN IRREVERSIBLE ILLNESS

