Ethics

(Professional Conduct, Legal Frameworks, and Best Practice)

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Ethics

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- **Ethics**:
  Principles of right and wrong that guide behaviour.
- **Example**: avoiding plagiarism.

- **Legal Frameworks**:
  Laws based on ethics to regulate behaviour.
- **Example**: Not sharing someone's private information without consent.

- **Best Practice**:
  Going beyond legal requirements to act ethically.
- **Example**: Asking for clear permission before collecting personal data.

- **Standards**:
  Formal rules that define and enforce best practice.
- **Example**: Following guidelines like GDPR to protect personal data.

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PART 1: Data Protection

Before 2018: The Data Protection Act (DPA)

Up until 2018, the **Data Protection Act (DPA)** governed data protection in the UK.

Key Features of the DPA:

1.Granted rights to 'data subjects':

- *Example*: Individuals could request a copy of personal data held about them (Subject Access Request).

2.Imposed obligations on organisations:

- *Example*: Organisations had to ensure personal data was securely stored.

3.Introduced the Information Commissioner role:

- *Example*: The Information Commissioner could issue fines for non-compliance and maintain a register of data controllers.

2018 Onwards: The General Data Protection Regulation (GDPR)

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Replaced the DPA in 2018 as the main framework for data protection in the UK and EU.

Key Enhancements Under GDPR:

1. **Expanded rights for data subjects**:
   - *Example*: Introduced the **Right to be Forgotten**, allowing individuals to request data deletion.

2. **Stricter obligations for organisations**:
   - *Example*: Required organisations to notify authorities of data breaches within **72 hours**.

3. **Strengthened the role of the Information Commissioner**:
   - *Example*: Increased fines, up to **€20 million or 4% of global turnover**, for non-compliance.

Why GDPR Compliance Matters

- If you collect personal data about EU citizens (data subjects): You must comply with GDPR, regardless of where your organisation is based.

- In the UK: Investigation and enforcement are carried out by the Information Commissioner's Office (ICO).

- Penalties for Non-Compliance: Major fines – up to 4% of global turnover or €20 million, whichever is higher.
- Examples:
    1. British Airways: £183 million (2019).
    2. Marriott Hotels: £99 million (2019).
    3. Facebook: £500,000 (2018, under the DPA).
- Takeaway: Compliance is essential to avoid significant financial and reputational damage.

Provisions (rights to data subjects)

1. **Consent**:
    1. Data collection requires informed and freely given consent.
    2. Individuals can withdraw consent at any time.

2. **Right to Be Forgotten**:
    1. Individuals can request data deletion.
    2. *Example*: Request data deletion.

3. **Right of Access**:
    1. Individuals can access their personal data held by organisations.
    2. *Example*: Request access to your data.

4. **Breach Notification**:
    1. Organisations must notify individuals and regulators of data breaches.
    2. *Example*: 2023 breach information.

Personal vs Sensitive data

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Personal Data

• Any information relating to a person who can be directly or indirectly identified.
• Only applies to natural persons (i.e., living individuals).
• Re-identification is surprisingly easy, even if identifying details are removed!

Sensitive Personal Data

• Includes data about protected attributes (e.g., health, race, religion).
    • *Full list*: Protected Attributes.
• Requires **greater justification** for collection.
• Must be protected with **higher security measures**.

Key Difference: Sensitive personal data involves stricter rules and protections due to its potential impact on individuals.

Principles of GDPR

You should be aware of the seven principles of GDPR

1. **Lawfulness, Fairness, and Transparency**:
    - Comply with other laws and provide evidence of lawfulness.
2. **Purpose Limitation**:
    - Collect data only for specified, valid reasons and inform individuals.
3. **Data Minimisation**:
    - Limit data collection to what is relevant and necessary for the stated purposes.
4. **Accuracy**:
    - Ensure data is up to date and allow individuals to correct inaccuracies.
5. **Storage Limitation**:
    - Delete data when it is no longer needed.
6. **Integrity and Confidentiality**:
    - Protect data from unauthorised access or breaches.
7. **Accountability**:
    - Demonstrate compliance with GDPR by keeping records and documenting actions.

What this means for you

1. **Approval from Ethics Review Boards (ERBs)**:
    - Required for research involving personal data.
        1. **Participatory Research**:
            1. Obtain informed consent from participants.
            2. Plan and document data handling, use, and retention.
        2. **Building Systems**:
            1. Ensure compliance with data handling protocols and lawfulness.
            2. Follow specific conditions for using third-party libraries.
2. **Document Everything**:
    - Keep detailed records to demonstrate compliance with what you planned and stated.
3. **Work with Experts**:
    - Collaborate with specialists who understand the legal requirements.
4. **If Working Alone**:
    - You'll need to familiarise yourself thoroughly with the relevant laws and regulations to ensure compliance.

British Computer Society (BCS) Code of Conduct

https://www.bcs.org/membership-and-registrations/become-a-member/bcs-code-of-conduct/
https://www.bcs.org/media/2211/bcs-code-of-conduct.pdf

Show what you know, learn what you don't

You have integrity and show competence, but you know you don't know everything, that's why you continuously learn and grow and never take on tasks that you don't have the skills and resources to complete.

PROFESSIONAL COMPETENCE AND INTEGRITY

You shall:

1. only undertake to do work or provide a service that is within your professional competence;
2. NOT claim any level of competence that you do not possess;
3. develop your professional knowledge, skills and competence on a continuing basis, maintaining awareness of technological developments, procedures, and standards that are relevant to your field;
4. ensure that you have the knowledge and understanding of legislation and that you comply with such legislation, in carrying out your professional responsibilities;
5. respect and value alternative viewpoints and seek, accept and offer honest criticisms of work;
6. avoid injuring others, their property, reputation, or employment by false or malicious or negligent action or inaction;
7. reject and will not make any offer of bribery or unethical inducement.

BCS Code of Conduct

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2. NOT claim any level of competence that you do not possess;

Example on 1.: If you're asked to design a database system but have no experience with databases, you should not proceed unless you've been trained or can consult with an expert.

Example on 2.: Avoid presenting yourself as a "cybersecurity expert" if your experience is limited to basic security settings.

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5. respect and value alternative viewpoints and seek, accept and offer honest criticisms of work;

Example on 5.: While developing a software application, a colleague suggests an alternative framework. You listen to their reasoning and consider its benefits. When your module is reviewed, you accept feedback about scalability issues and make improvements. In return, you respectfully point out potential security risks in a teammate's code, suggesting fixes. This fosters collaboration and improves the project's quality.

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PART 2: Equality

Equality Act of 2010

- Replaced previous equality laws to simplify protections.
- **Protects against discrimination:**
- **Direct**: Treating someone unfairly due to a protected characteristic.
- **Indirect**: Policies or practices that disadvantage certain groups.

- **Monitored by the Equality and Human Rights Commission (EHRC):**
- Make a claim: EHRC Guidance.
- Focuses on **digital services and AI** impacts.

- **Linked to GDPR**: Ensures fairness and lawfulness in data use.
- **Example**: If an AI system is trained using personal data, it must not only comply with GDPR but also ensure it does not discriminate against protected groups (e.g., based on gender, race, or disability) under the Equality Act. This connection ensures fairness in both data handling and its outcomes.

Accessibility

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Inequities between different groups of people may result from the use or misuse of information and technology. Technologies should be as inclusive and accessible as possible. Failure to design for inclusiveness and accessibility may constitute unfair discrimination.

In Week 5, we covered accessibility. It's important to note that failing to design for inclusiveness and accessibility can be considered unfair discrimination, potentially leading to penalties from the EHRC.

Positive Action vs Discrimination

- **Positive Action** (*Recommended*):
- Steps to improve representation and inclusion.

- **Examples**:
  - Helping individuals overcome disadvantages.
  - Meeting specific needs.
  - Encouraging underrepresented groups to participate (e.g., through targeted outreach).

- **Positive Discrimination** (*Unlawful*):
- Treating one group less favourably than another.
- Example: Refusing to hire men solely to increase the number of women.

How AI discriminates

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Amazon scrapped 'sexist AI' tool

10 October 2018

"The system started to penalise CVs which included the word "women". "

https://www.bbc.co.uk/news/technology-45809919
https://www.aclu.org/news/womens-rights/why-amazons-automated-hiring-tool-discriminated-against

How AIs discriminate

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Councillor calls for ban on facial recognition cameras in East London borough

Councillor Areeq Chowdhury argues the live practice is heavily unregulated

"There's also the risk of the technology disproportionately targeting people of colour and an innocent person getting arrested"

https://www.mylondon.news/news/east-london-news/councillor-calls-ban-facial-recognition-25990803

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You make IT for everyone

Working together to address issues in your profession and in wider society, you want everyone to have access to IT. You share what you know, uphold standards and conduct yourself professionally and fairly at all times.

PUBLIC INTEREST

You shall:

1. have due regard for public health, privacy, security and wellbeing of others and the environment;
2. have due regard for the legitimate rights of third parties;
3. conduct your professional activities without discrimination on the grounds of sex, sexual orientation, marital status, nationality, colour, race, ethnic origin, religion, age or disability, or of any other condition or requirement;
4. promote equal access to the benefits of IT and seek to promote the inclusion of all sectors in society wherever opportunities arise.

This gives you a new perspective on these aspects of the BCS – that you are expected to care about the wellbeing of others and how they might be harmed by the systems you create.

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PART 3: Governance

Governance can be complex, so you might be wondering how companies ensure their systems follow rules and best practices.

Roles in AI Development

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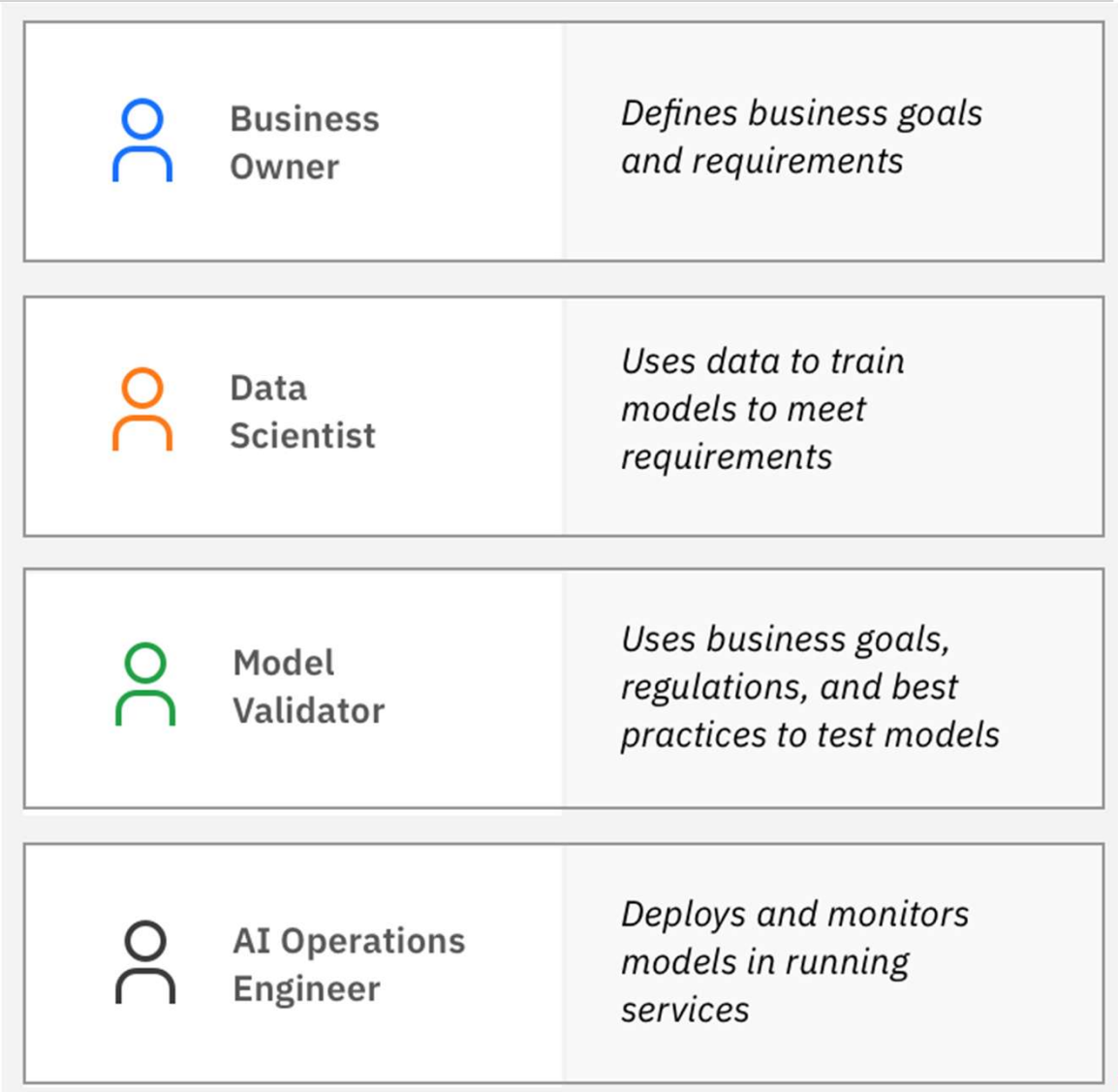
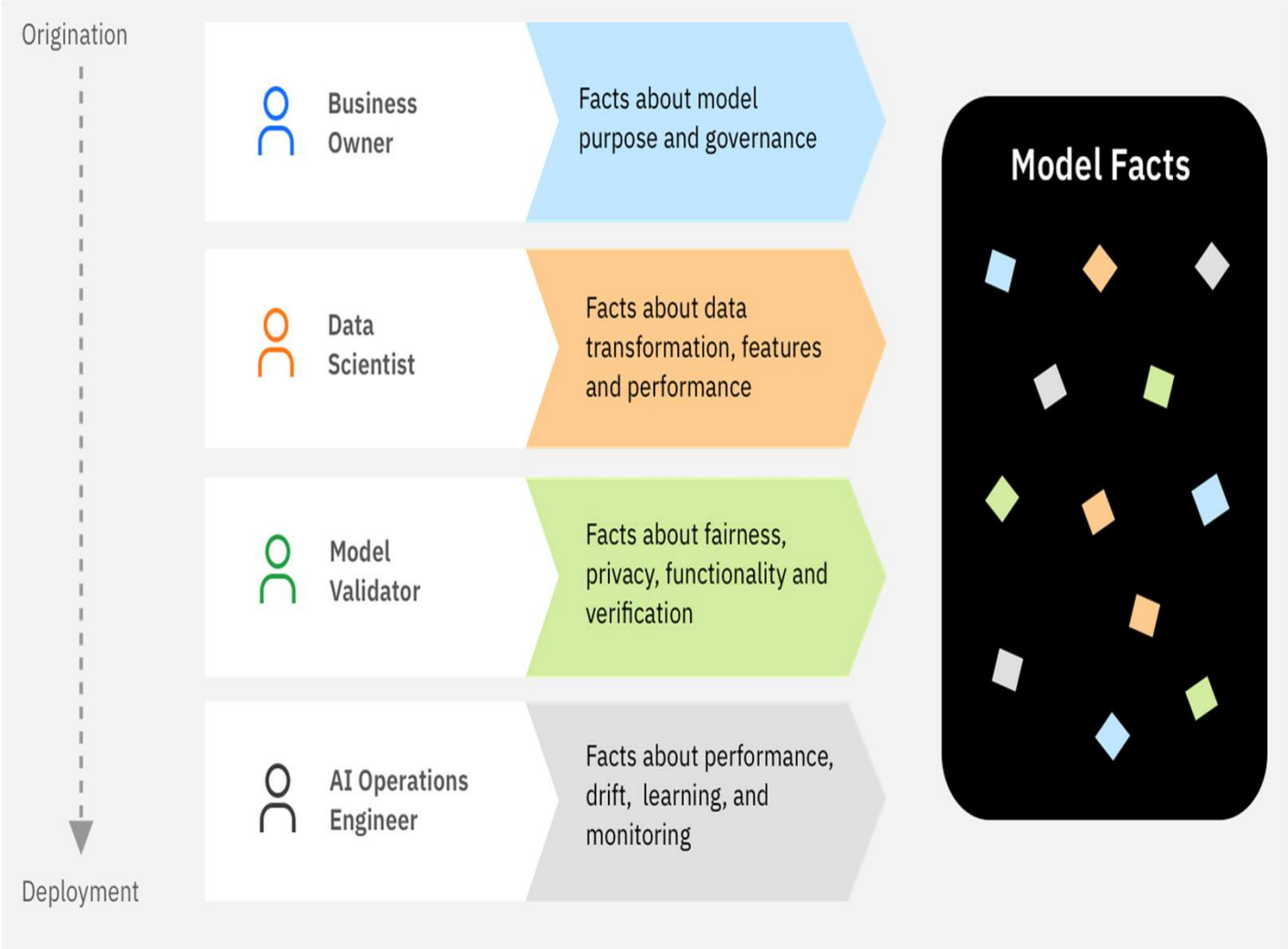
When developing AI systems, several key roles work together to ensure the system is functional, compliant, and responsible.



https://aifs360.res.ibm.com/governance

AI Lifecycle (roles)

For any of these actors, part of their practice will be contributing to the documentation for that system.



https://aifs360.res.ibm.com/governance

Factsheets

Factsheets are standardised documents providing key details about an AI system's purpose, design, data, and performance, tailored for different stakeholders to ensure transparency and accountability.

Once you've gathered all the information, it must be tailored to the needs of different stakeholders, such as clients, risk managers, and auditors. IBM is standardising the AI lifecycle documentation process through Factsheets, which are explained further in link below.

https://aifs360.res.ibm.com/introduction

Standard: Algorithmic Transparency

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1. The profession is moving towards producing **auditable documentation** for AI systems, with efforts like the UK's **Algorithmic Transparency Standard**.

2. Challenges remain in defining facts that demonstrate compliance with legal concepts like **fairness** (transparency and accountability).

3. Active research focuses on developing **metrics** to evaluate AI systems against regulations and best practices.

https://www.gov.uk/government/collections/algorithmic-transparency-reports

What this means for you

1. **Changing Expectations and Opportunities**:
    1. If you're developing software, thorough documentation of your processes is essential.
    2. Roles in monitoring and compliance are growing—technical expertise is in demand.
    3. Research opportunities are increasing to develop metrics for evaluating AI systems.

2. **Government Investment in Training Auditors**:
    1. New career paths include working for organisations like the **ICO** or **EHRC**.

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It's important that you disclose information to authorities when you're asked to do so and that you do this honestly.

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4. ensure that you have the knowledge and understanding of legislation and that you comply with such legislation, in carrying out your professional responsibilities;

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Stay updated on evolving best practices, standards, and legislation in your field, as governance processes are rapidly changing, driven by academic research and high standards set by big tech companies.

Explore available resources, such as IBM's AI Governance toolkits, to improve your processes—links are provided on Moodle for further guidance.

4. NOT disclose or authorise to be disclosed, or use for personal gain or to benefit a third party, confidential information except with the permission of your relevant authority, or as required by legislation;
5. NOT misrepresent or withhold information on the performance of products, systems or services (unless lawfully bound by a duty of confidentiality not to disclose such information), or take advantage of the lack of relevant knowledge or inexperience of others.

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PART 4: Regulating AI

AI Safety Summit

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1 Nov 2023 – 2 Nov 2023 – Bletchley Part Buckinghamshire

AI Summit 2023: Key Achievements

•**Unprecedented Global Coordination**: World leaders, including China, came together to discuss AI governance.

•**AI Expert Panel Established**: Tasked with identifying and assessing potential AI risks.

•**Consensus on Regulation**: Agreement that AI requires robust regulatory frameworks

•**Government Testing Plans**: Commitment to testing AI systems to ensure safety and accountability.

Criticisms of the AI Summit

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- **Bias Towards Big Tech**:
  - Large tech companies have a disproportionate advantage because:
    - They helped shape the laws, giving them insider knowledge.
    - They have the financial resources to navigate compliance.
    - They already have established governance processes, unlike smaller organisations.

Criticisms of the AI Summit

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- **Standards and Enforcement**:
  - No clear agreement on global standards or mechanisms to enforce regulations.
- **Governance Model**:
  - Should regulation be **top-down** (government-led) or **democratic** (inclusive and participatory)?
- **Role of the Tech Industry**:
  - Is it appropriate for the tech industry to shape the very rules that govern their technologies?

Further details: Oxford AI Experts' Comments

How You Can Get Involved

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1. **Learn and Stay Informed**:
   - Follow organisations like the **Ada Lovelace Institute** or **Partnership on AI** to learn about ongoing discussions.
   - Attend free webinars, public lectures, or workshops on AI ethics and policy.
2. **Engage Locally**:
   - Join university societies focused on tech and ethics.
   - Participate in student hackathons or projects addressing ethical issues in technology.
3. **Raise Awareness**:
   - Write blogs or articles about responsible technology.
   - Present ideas in university forums or tech meetups to encourage discussion.
4. **Prepare for Future Roles**:
   - Build expertise through coursework, projects, and internships.
   - Network with professionals by attending conferences or online events.