



Coding Fairness: Women Leading the Ethical AI Revolution

Empowering diversity and ethics in artificial intelligence



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Diversity's Role in Ethical AI

Diversity is essential to prevent bias and ensure AI systems are equitable and inclusive for all users.

Embedding Responsibility in AI

Responsibility must be integrated into AI systems from the design phase to promote ethical outcomes.

Empowering Women Leaders

Empowering women in tech is vital for steering AI development towards fairness and reducing systemic biases.

Practical Strategies for Fair AI

Implementing actionable strategies helps women actively lead and influence the creation of fair AI systems.



What you'll get in 20 minutes

Understanding Bias and Diversity

Learn why bias is predictable without diversity and how inclusive teams improve AI safety and effectiveness.

Embedding Responsibility in AI

Explore a practical, auditable framework to integrate ethical responsibility into AI systems from the start.

Strategies for Women in Tech

Discover four actionable strategies empowering women to influence AI development for equitable outcomes.

Bias is not accidental



Source of Bias in AI

Bias arises from historical data that reflects societal inequalities and lack of diverse perspectives in development teams.

Impact of Homogeneous Teams

Homogeneous teams often overlook data exclusions, leading to AI systems that amplify existing biases.

Importance of Diverse Voices

Diverse teams empower questioning of assumptions, helping to identify and reduce biases in AI systems.

Addressing Bias Systemically

Understanding bias as systemic enables organizations to proactively mitigate it and build equitable technologies.

When past data writes the future



Some examples and resources that help understand the inherent bias better :

Recruitment AI Case Studies

Case studies explore recruitment AI and HR implications highlighting fairness and responsibility.

Recruiting AI trained on male-dominated resumes learned to downrank signals of women; project scrapped. [Reuters/CNBC 2018; MIT Tech Review 2018]

Healthcare

A widely used U.S. health-care risk prediction algorithm was found to systematically under-refer Black patients to high-risk care management programs because it used future health-care cost as a proxy for medical need, rather than directly measuring illness severity.

Period-tracking apps exhibit bias through oversimplified algorithms, limited representation, and risky data practices: many rely on calendar-based models that assume a “normal” 28-day cycle and fixed ovulation timing, which systematically underperform for people with irregular cycles, PCOS, perimenopause, or postpartum changes

A lot more resources is provided on the last slide.

Australian Leadership in Responsible AI



What good looks like in Australia

Ethical AI Principles

Australia's AI Ethics Principles promote fairness, transparency, and accountability in technology development.

Responsible AI Policy

The Commonwealth's policy mandates impact assessments and transparency statements before AI deployment.

Lifecycle Risk Management

NSW AI Assessment Framework requires continuous risk evaluation and mitigation throughout AI operation.

Empowering Women to Steer AI Toward Equity

Four power moves for women in tech



Influence AI Development

Women should ask critical questions about beneficiaries and potential harms to influence AI design and development.

Incorporate Fairness Metrics

Integrate fairness into success metrics to prioritize equity alongside AI technical performance and outcomes.

Tools available to assist

Fairness Indicators is a Google-developed evaluation toolkit (part of the TensorFlow / TFX ecosystem) designed to help teams measure and visualise fairness metrics at scale. Rather than relying on a single aggregate score, it enables model evaluation across slices of data—for example by gender, age band, or other relevant attributes—so that disparities hidden in overall metrics become visible. The tool supports binary and multi-class classifiers, evaluates models at multiple decision thresholds, and can surface statistically meaningful differences using confidence intervals. Fairness Indicators is intended to support responsible deployment decisions, transparency artefacts (such as model cards), and ongoing monitoring, particularly in large or high-impact systems.

IBM AI Fairness 360 pairs extensive fairness metrics with practical mitigation algorithms across data, model, and output stages—making it one of the most comprehensive toolkits for moving from bias detection to actionable fairness intervention.

Evaluate Underrepresented Groups

Test AI systems on edge cases and underrepresented groups to ensure broad, equitable performance.

Ethical Pause and Advocacy

Create pause conditions and speak up on ethical concerns to promote justice in AI systems.

Takeaways



AI Bias as Leadership Issue

Bias in AI is primarily a leadership challenge, requiring commitment beyond technical fixes.

Importance of Diverse Teams

Diverse teams reduce risks and improve AI development outcomes through varied perspectives.

Individual Impact on AI Ethics

Every person can influence AI toward fairness by making ethical choices in their work.

Women Leading Ethical AI

Women in technology can spearhead the ethical AI revolution to benefit all society members.

More Resource links

Gender Data Gaps Resource

'Invisible Women' highlights significant gender data gaps affecting fairness in AI and society.

<https://www.amazon.com.au/Invisible-Women-Exposing-World-Designed/dp/1784706280>

'Visible Women' podcast explores gender data issues and privacy concerns in technology.

<https://podcasts.apple.com/au/podcast/visible-women-with-caroline-criado-perez/id1627229311>

[Beyond the Bots_ Leading the Human and Organizational AI Revolution \(1\) 2.m4a](#)

Pay Equity and workplace fairness:

[We must safeguard pay equity and workplace fairness in the AI future](#)

[AI coming for your job? Australian women can't afford to sit this out](#)

[Evaluating gender bias in large language models in long-term care | BMC Medical Informatics and Decision Making | Full Text](#)

Ethical AI in Education

'AI in Education' podcast discusses ethical AI applications and digital twins in healthcare.

<https://podcasts.apple.com/au/podcast/ai-in-education-podcast/id1481311877>

<https://podcasts.apple.com/au/podcast/ai-in-education-podcast/id1481311877?i=1000706892967>

Students on Using AI Ethically - <https://podcasts.apple.com/au/podcast/ai-in-education-podcast/id1481311877?i=1000720143277>

Understanding Bias

[Why Amazon's Automated Hiring Tool Discriminated Against Women | American Civil Liberties Union](#)

[Workday ordered to reveal AI hiring clients: Why it matters for every HR leader | The People Space](#)

[AI job recruitment tools could 'enable discrimination' against marginalised groups, research finds - ABC News](#)

<https://bmcmecinformdecismak.biomedcentral.com/articles/10.1186/s12911-025-03118-0#Tab9>

