

Preschool Teachers

AI augmenting administrative tasks, resource creation, and some personalized learning, but core human interaction remains irreplaceable.

EXPOSURE 25 Low exposure	WINDOW 10–15 yrs until change lands	ADOPTION TODAY Low	READING AI assists; the work stays human-led. Exposure is the share of today's work AI can plausibly take on within the window.
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§ 01WHAT IS HAPPENING

What is happening to preschool teachers

Impact	AI tools are assisting with creating age-appropriate materials, adapting activities, automating basic documentation, and providing supplementary learning games. This shifts Preschool Teachers' focus towards fostering socio-emotional development, nuanced observation, ethical oversight of AI, and building profound child-teacher relationships.
Risk	Moderate augmentation; premium on human connection, empathy, and holistic child development. The Preschool Teacher role will be moderately augmented by AI. AI will handle more routine data collection, age-appropriate material generation, and administrative tasks. Preschool Teachers will need to become experts in leveraging AI tools for efficiency and enhanced learning experiences, critically evaluating AI outputs, and focusing on the irreplaceable human elements of their role: profound empathy, nurturing relationships, nuanced observation of developmental milestones, and critical ethical decision-making regarding child safety and well-being.

Sector readiness

Emerging & Ethically Cautious Integration

The early childhood education sector is cautiously exploring and integrating AI, primarily for administrative support, personalized learning activities, and some developmental tracking. Ethical considerations around child safety, data privacy, screen time, and the imperative for human connection in early development are significantly shaping the pace and nature of AI adoption.

§ 02 POSITION

Where you stand

- i The Preschool Teacher role is undergoing moderate augmentation by AI, particularly in administrative tasks and content creation.
- ii AI will autonomously manage documentation, optimize learning activities, and generate educational materials, compelling Preschool Teachers to pivot to indispensable human empathy, nuanced child development observation, and profound ethical judgment.
- iii Survival and impact will hinge on Preschool Teachers mastering AI tools, critically validating AI outputs for age-appropriateness, championing ethical AI use, and providing irreplaceable human connection and nurturing at the heart of early childhood development.

§ 03 ACTIONS

15 POINTS

What this means for you

Concrete changes to how the work gets done, in the order you are likely to meet them.

- 01 **AI-Assisted Lesson Planning & Activity Generation.** Preschool Teachers are leveraging AI tools to generate new ideas for age-appropriate lessons, craft activities, and curriculum themes. This capability expands creative possibilities for engaging young learners and helps differentiate activities for diverse developmental levels.
- 02 **Automated Documentation & Progress Tracking.** AI will autonomously handle a significant portion of documentation for Preschool Teachers, including tracking developmental milestones, populating observational checklists, and generating initial drafts of parent communication or progress reports. This frees up time for direct child interaction.
- 03 **AI-Powered Personalized Learning Games & Drills.** Preschool Teachers will orchestrate AI platforms that autonomously deliver highly personalized learning games and interactive drills adapted to individual child's pace, learning style, and specific developmental areas (e.g., early literacy, numeracy). The teacher will validate these AI-orchestrated activities and manage the nuanced human elements of play-based learning.

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- 04 **Generative AI for Storytelling & Creative Content.** AI can autonomously generate original children's stories, rhyming poems, songs, or visual aids (e.g., illustrations for flashcards) based on specific themes or learning objectives. This streamlines content creation and encourages imaginative play.
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- 05 **Focus on Socio-Emotional Development & Behavior Management.** As AI assumes command of routine administrative and content creation tasks, the paramount value of Preschool Teachers will be their irreplaceable human ability to foster social skills, emotional regulation, empathy, and positive behavior through direct interaction and guidance.
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- 06 **Real-time AI-Assisted Observation & Feedback.** AI tools (e.g., via unobtrusive cameras, wearable sensors) are providing Preschool Teachers with real-time feedback on children's engagement levels, attention spans, and interactions during activities. This augments teacher observation and supports timely interventions.
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- 07 **Ethical AI Use & Child Data Privacy Guardianship.** Preschool Teachers will be at the forefront of ensuring AI tools protect sensitive child data, address algorithmic bias in developmental assessments or behavioral tracking, and uphold ethical standards in all AI-augmented educational practices, prioritizing child well-being and privacy.
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- 08 **AI-Driven Parent Communication & Engagement.** AI can autonomously handle a significant portion of routine parent communication, including daily updates, activity summaries, and reminders for school events. Preschool Teachers will focus on addressing individual parent concerns and building strong home-school partnerships.
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- 09 **Human-AI Teaming for Classroom Management.** Preschool Teachers will work synergistically with AI as an intelligent assistant in the classroom. AI can provide real-time data on student engagement, suggest activities, or flag potential behavioral issues, allowing the teacher to lead classroom dynamics and maintain human connection.
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- 10 **AI for Differentiated Instruction.** AI tools autonomously generate adapted learning materials and activities to meet the diverse developmental needs of children in the classroom, including those with learning differences or language barriers, ensuring inclusive learning environments.
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- 11 **Continuous Learning & EdTech Literacy.** The rapid evolution of AI tools in early childhood education demands that Preschool Teachers commit to continuous, aggressive learning of new AI-powered tools, their profound capabilities, and intricate ethical implications, as a foundational competency for effective teaching.
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- 12 **AI-Assisted Developmental Screening.** AI tools can analyze observational data and assessment results to provide preliminary developmental screenings, identifying children who might benefit from early intervention services. The teacher will validate these screenings for referrals.
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- 13 **Focus on Play-Based Learning & Experiential Education.** As AI streamlines content delivery, the irreplaceable human role of Preschool Teachers in facilitating unstructured play, hands-on experiential learning, and fostering curiosity through direct interaction becomes even more central to child development.
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- 14 **Leadership in Early Childhood EdTech.** Preschool Teachers in leadership roles will play a crucial role in guiding their schools through the adoption of AI, advocating for developmentally appropriate AI solutions, and fundamentally shaping the future of early childhood education.
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- 15
- Strategic Planning for Early Years Curriculum.** AI can assist Preschool Teachers in analyzing curriculum effectiveness, identifying areas for improvement, and aligning teaching strategies with early learning standards and individual child development goals.

What is pushing this change

- 01
- Explosive Growth of Child Development Data (Behavioral, Learning).** Vast amounts of data from classroom observations, learning activities, and developmental assessments provide rich input for AI models.
- 02
- Advancements in AI/ML (Adaptive Learning, Computer Vision, Generative AI).** Breakthroughs in AI fields enable sophisticated analysis of child behavior, adaptive content, and generative material creation.
- 03
- Need for Scalable & Accessible Early Childhood Education.** AI offers a potential pathway to provide individualized early childhood education support to a larger student population, overcoming resource barriers.
- 04
- Critical Shortage of Early Childhood Educators & Burnout.** The severe global shortage of early childhood educators compels aggressive AI adoption to radically augment human capacity.
- 05
- Pervasive Growth of Smart Toys & EdTech Devices.** Pervasive growth of AI-enabled smart toys, educational apps, and interactive devices generate continuous data for AI analysis.
- 06
- Urgent Demand for Personalized & Developmentally Appropriate Learning.** Parents and educators demand highly individualized learning experiences tailored to each child's developmental stage and needs.
- 07
- Complexity of Diverse Learning Needs & Developmental Stages.** Understanding the complex interplay of cognitive, emotional, and social factors in diverse learning needs benefits from AI support.
- 08
- Parental Expectations for Technology-Enhanced Learning.** Parents increasingly expect technology to enhance their child's early learning experiences, driving EdTech adoption.
- 09
- Mandatory Regulatory Compliance (Child Safety, Privacy).** Child data privacy laws (e.g., COPPA) and safety regulations heavily influence AI development and deployment in early education.
- 10
- Focus on Socio-Emotional Learning (SEL).** AI can assist in designing activities that promote SEL skills, an increasingly recognized core component of early childhood development.

Impact by sector

The headline figure is an average. Where you work changes the picture.

Classroom Teachers (General Preschool/Pre-K)	AI for generating lesson ideas, activity variations, and basic progress tracking. Focus on daily classroom management and direct interaction.
Special Education Preschool Teachers	AI for creating differentiated materials, adapting communication aids (AAC), and tracking behavioral patterns for students with severe needs. Focus on comprehensive support and safety.
Early Intervention Specialists	AI for early developmental screening, identifying at-risk children, and suggesting personalized intervention strategies. Focus on data-driven early support.
Curriculum Coordinators (Early Childhood)	AI for curriculum analysis, material selection, and aligning learning activities with developmental standards. Focus on educational planning and quality.
Home-based Preschool Providers	AI for managing scheduling, providing personalized educational activities for individual children, and streamlining parent communication. Focus on flexibility and personalized home learning.

Skills to build

The skills that keep the human part of this work valuable as the routine part is automated.

- 01 **Nurturing & Empathetic Communication.** The core ability to build profound trust and rapport with young children and families, providing compassionate, reassuring, and clear communication.
- 02 **Child Development Knowledge.** Deep understanding of child developmental stages (cognitive, social, emotional, physical) and age-appropriate learning strategies.
- 03 **Classroom Management & Engagement.** Mastery of creating a safe, engaging, and structured classroom environment, fostering positive behavior and active participation.
- 04 **AI/EdTech Literacy (Early Ed).** Proficiency in using AI-powered learning apps, digital storytelling tools, and basic AI assessment platforms tailored for young children.
- 05 **Observation & Assessment (Nuanced).** The ability to accurately observe and interpret children's behavior, learning patterns, and developmental progress beyond what AI can detect.

- 06

Ethical AI Use & Child Privacy. Upholding the highest standards of child data privacy, understanding potential biases in AI assessments, and ensuring ethical AI use with young learners.
- 07

Play-Based Learning Facilitation. Expert skill in designing and guiding play-based learning activities, fostering curiosity, and facilitating hands-on experiential education.
- 08

Adaptability & Creativity. Willingness to rapidly learn new AI tools, adapt teaching methodologies, and continuously experiment to enhance early learning experiences.

§ 07 INSTRUMENTS

11 ENTRIES

Tools in use

KINDS OF TOOL WORTH KNOWING

- 01

AI-Powered Lesson & Activity Generators. Software that uses AI to generate age-appropriate lesson plans, craft activities, and curriculum themes for preschool children.
- 02

AI-Assisted Developmental Screening Tools. AI tools that analyze observational data and assessment results to provide preliminary developmental screenings for young children.
- 03

Generative AI for Educational Content (Stories, Visuals). Large Language Models and other AI tools used to autonomously generate original children's stories, poems, songs, or visual aids.
- 04

AI-Powered Personalized Learning Apps (Early Ed). AI-powered educational games and apps that adapt content, pace, and difficulty in real-time based on individual child's performance.
- 05

AI for Automated Progress Tracking & Reporting. AI tools that autonomously track developmental milestones, student engagement in activities, and populate progress reports.
- 06

AI for Parent Communication Platforms. Platforms that integrate AI to automate routine parent communication, daily updates, activity summaries, and event reminders.

NAMED TOOLS ALREADY IN USE

- MagicSchool AI / Curipod / Diffit (for teachers)**

VISIT

AI platforms designed to assist teachers in creating lesson plans, assessments, and various educational materials, adaptable for preschool.
- Early Start Denver Model (ESDM - AI-assisted analysis) / ASQ (AI analysis)**

VISIT

Developmental assessment tools that are beginning to integrate AI for data analysis and early identification of developmental delays.
- Flocabulary (AI lyrics) / Storybird (AI illustrations)**

VISIT

Generative AI platforms that can create educational songs, stories, and visual content suitable for young learners.
- ABCmouse.com (AI adaptive features) / Homer Learning**

VISIT

Leading early learning apps that incorporate AI for personalized content delivery and adaptive learning experiences.

ReadyRosie (with AI for parent engagement) / ClassDojo (AI features)

VISIT

Parent engagement platforms that are integrating AI to streamline communication and track family involvement in early learning.

§ 08 EXAMPLES

5 EXAMPLES

In practice

Ways people in this role are already using AI, and what they get from it.

Automate Daily Progress Reports

EXAMPLE 1

HOW

Preschool Teachers can use an AI-powered documentation system where they input observations throughout the day. The AI will autonomously compile these observations into daily progress reports for each child, automatically populating sections on activities, meals, and mood for parent review.

GAIN

Radically reduces administrative burden, ensures consistent daily updates for parents, and frees up teachers for direct child interaction.

Generate Personalized Learning Activities

EXAMPLE 2

HOW

Preschool Teachers will orchestrate an AI-powered adaptive learning platform. Based on a child's developmental assessment results and learning style, the AI will autonomously suggest and provide interactive games or sensory activities tailored to address specific skill areas (e.g., fine motor, cognitive).

GAIN

Dramatically increases child engagement and learning outcomes, provides highly individualized support, and optimizes developmental progress for each child.

Streamline Parent Communication

EXAMPLE 3

HOW

Preschool Teachers will configure an AI-powered communication platform to autonomously send personalized daily updates to parents about their child's activities, learning progress, and photos/videos from the classroom. The AI can also manage event reminders and permission slips.

GAIN

Ensures consistent and timely parent communication, improves family engagement, and reduces administrative workload for teachers.

Create Engaging Story-time Content

EXAMPLE 4

HOW

Preschool Teachers can instruct a generative AI tool to create new, age-appropriate children's stories or songs based on a weekly theme (e.g., "farm animals," "friendship"). The AI will autonomously generate narratives, rhymes, and even simple illustrations for story time.

GAIN

Expands creative resources for teachers, enhances storytelling sessions with fresh content, and encourages imaginative play.

Track Developmental Milestones EXAMPLE 5	HOW	Preschool Teachers can utilize an AI tool that autonomously analyzes their observations and informal assessment data. The AI will track each child's progress against developmental milestones (e.g., language acquisition, social skills, gross motor development) and flag any areas for concern or specialized intervention.
	GAIN	Provides objective, continuous tracking of developmental progress, enables early identification of delays, and supports data-driven intervention planning.

§ 09

CONTEXT

How this role compares

Three neighbouring roles chosen to show the direction of travel.

Daycare Workers (Routine care, basic supervision) MORE EXPOSED	AI IMPACT	Catastrophic (AI/Robotics can autonomously manage basic supervision, meal preparation, and routine cleaning.)
	WORK MOVES TO	Immediate need for radical re-skilling into AI oversight, robot management (if applicable), or specialization in complex child behavior support.
AI in Early EdTech Developers / Child Development Data Scientists DIFFERENT SKILLS, GROWING	AI IMPACT	Foundational (They design and build the AI algorithms and systems that power adaptive learning and developmental tracking in early childhood.)
	WORK MOVES TO	Deep expertise in advanced AI/ML algorithms, learning science, child psychology, and software engineering, with a focus on early education.
Child Psychologists / Early Intervention Therapists (e.g., SLP, OT) COMPLEMENTARY, LESS EXPOSED	AI IMPACT	Low-Moderate Augmentation (AI assists in assessment data analysis for psychologists/therapists; AI provides data for interventions), but core psychological diagnosis, therapeutic relationships, and direct family/community intervention remain paramount.
	WORK MOVES TO	Complex psychological diagnosis, therapeutic relationships, and crisis intervention (Child Psychologists); Direct therapeutic interventions, family training, and holistic child development support (Early Intervention Therapists).

Closing judgement

For Preschool Teachers, AI is not merely a tool but a radical force of transformation that will fundamentally redefine early childhood education. It will autonomously manage routine tasks, personalize learning, and streamline documentation, compelling teachers to pivot to indispensable human empathy, nuanced observation, and profound nurturing. The future Preschool Teacher will be a visionary orchestrator of human-AI collaboration, providing irreplaceable connection and guidance at the heart of every child's development.

Evidence and revisions

What the exposure figure rests on, what changed when it was last revised, and the published work cited for this role.

SCORE

20 to 25

WINDOW

10-15 years (unchanged)

The 4 October 2026 review moved the score up by 5 points.

Microsoft's AI applicability score for the matching occupation is 0.16, in the upper half of 785 US occupations; Anthropic's observed-exposure data records almost no Claude usage on this occupation's tasks; the US Bureau of Labor Statistics places it in the 'moderate' AI-exposure tier; BLS projects employment to grow 4.5% over 2025–35. Blending our 2025 editorial figure (60%) with the 2026 evidence composite (40%) moves the score from 20 to 25.

MEASURES BEHIND THE SCORE

US Bureau of Labor Statistics · *Employment Projections 2025–35 and AI Exposure Categories* (27 August 2026)

AI-exposure tier: Moderate. Projected employment change 2025–35: +4.5%. Matched to Preschool teachers, except special education.

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Microsoft Research · *Working with AI: Measuring the Applicability of Generative AI to Occupations* (10 July 2025)

AI applicability score 0.16 (percentile 55 of 785 occupations) for SOC 25-2011.

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Anthropic · *Anthropic Economic Index report: Cadences* (26 June 2026)

Observed exposure 0.00 for SOC 25-2011 (no meaningful Claude usage recorded on these tasks).

PUBLISHER PDF

UK Department for Science, Innovation and Technology · *Assessment of AI capabilities and the impact on the UK labour market* (28 January 2026)

UK context: around 70% of UK workers are in occupations with tasks AI could perform or enhance, above the US average; a one-standard-deviation rise in exposure was associated with a 3.9% fall in UK job postings.

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ALSO CITED FOR THIS ROLE

International Monetary Fund · *Bridging Skill Gaps for the Future: New Jobs Creation in the AI Age* (14 January 2026)

Teaching is treated as high-complementarity work: AI changes preparation and assessment tasks while the in-person role persists.

PUBLISHER PDF

OECD · *OECD Employment Outlook 2026* (7 July 2026)

OECD evidence points to transformation rather than displacement in education, with teacher shortages persisting across member countries.

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<https://www.careerguard.ai/sources>

§ 12 APPENDIX

Method and sources

Each report was written from a large body of published research and then, in October 2026, re-scored against occupation-level evidence: the US Bureau of Labor Statistics AI-exposure classification and 2025–35 projections, Microsoft Research's AI applicability scores and Anthropic's observed-exposure data, cross-checked against the reports listed in the Evidence section above. The organisations and publications below are the standing literature behind the narrative sections. Every source, with dates, licences and archived copies where we are permitted to hold them, is catalogued in the research library.

Scores are revised by blending the previous editorial figure (60%) with a composite of the three occupation-level measures (40%), capped at fifteen points per revision and rounded to the nearest five. The window shifts one notch when a score moves ten points or more. Hand adjustments are recorded with their reason in the revision log.

I GLOBAL AND MACROECONOMIC IMPACT OF AI ON WORK

World Economic Forum

The Future of Jobs Report series — Employer survey of expected job growth and decline, skill shifts and technology adoption (2020, 2023 and 2025 editions); *Artificial Intelligence and the Future of Entry-Level Work* (2026).

AI governance and transformation reports — Frameworks on ethical AI, talent strategy and industry transformation.

McKinsey Global Institute

AI, Automation and the Future of Work series — Research quantifying automation potential by task, sector and demographic, from "Jobs Lost, Jobs Gained" to "Agents, robots, and us" (2025).

Industry-specific reports — Financial services, healthcare, manufacturing and others.

PwC

Global AI Jobs Barometer — Annual analysis of job postings and productivity by AI exposure (2024–2026 editions).
Upskilling Hopes and Fears survey — Employee perceptions and readiness.

Microsoft Research and Anthropic

Working with AI (2025); *Anthropic Economic Index (2025–2026)* — Occupation-level usage data from Copilot and Claude conversations, the two observed-usage measures behind the 2026 revision.

Stanford Digital Economy Lab and Stanford HAI

Canaries in the Coal Mine? (2025–2026); *AI Index Report (annual)* — Payroll evidence on early-career employment in exposed occupations; annual measurement of AI capability, investment and adoption.

Deloitte

Human Capital Trends series — Workforce, talent and HR technology trends.
Tech Trends series — Emerging technologies and their business implications.

Accenture

Technology Vision series — Forward-looking analysis of emerging technology, with emphasis on AI.
Fjord Trends — Design, innovation and human experience in a digital world.

Boston Consulting Group

AI/ML insights and industry solutions — "The AI Revolution in the Workplace" and related research.

EY

AI and workforce reports — Adoption, talent strategy and ethics.

IBM Institute for Business Value

AI and automation studies — Business models, workforce evolution and leadership.

OECD

AI Policy Observatory — International data and policy on AI, labour markets and skills.
Employment Outlook — Labour-market trends including technological impact (2023–2026 editions).

International Labour Organization

Generative AI and Jobs: A Refined Global Index of Occupational Exposure (2025) — Task-level exposure gradients for every ISCO occupation; successor to the 2023 global index.

International Monetary Fund

Staff Discussion Notes on AI and work (2024, 2026) — Complementarity framing: where AI augments and where it substitutes.

UK Department for Science, Innovation and Technology

Assessment of AI capabilities and the impact on the UK labour market (2026) — UK occupational exposure and job-posting evidence.

Brookings Institution

AI and automation research — Economic and social implications, displacement and skills.

Yale Budget Lab and Goldman Sachs Research

Tracking the Impact of AI on the Labor Market; *AI and the US labour market (2026)* — Aggregate labour-market monitoring; macro displacement estimates.

Oxford University (Oxford Martin School)

The Future of Employment — Frey & Osborne and subsequent research on susceptibility to automation.

MIT Technology Review

AI & Work — Reporting on AI research and its implications for industries and jobs.

Gartner

Hype Cycle for Artificial Intelligence — Maturity and adoption of AI technologies.
Future of Work reports — Workplace models and talent strategy.

U.S. Bureau of Labor Statistics

Employment Projections 2025–35; AI Exposure Categories; Occupational Outlook Handbook — Ten-year employment projections and, from the 2025 cycle, an AI-exposure tier for every detailed occupation.

Indeed Hiring Lab

AI at Work Report (2025) and posting-market updates — Skill-level transformation estimates and job-posting trends by occupation.

II CORE AI AND MACHINE-LEARNING RESEARCH

OpenAI

Research papers, blog and API documentation — Large language models, generative AI, safety and societal impact.

Google DeepMind

Research papers and blog — Reinforcement learning, AI for science, AGI and ethics.

Meta AI

Research papers and blog — Large language models, computer vision, AI for social good.

Hugging Face

Transformers library and model hub — Open-source state-of-the-art NLP models.

TensorFlow and PyTorch

Documentation and community forums — Core frameworks illustrating practical capability.

arXiv

cs.AI, cs.LG, cs.CV, cs.CL — Pre-print research.

NeurIPS and ICML

Conference proceedings — Top-tier academic research.

ACM and IEEE

Journals and proceedings — ACM Computing Surveys; IEEE Transactions on AI.

Kaggle

Datasets and competition solutions — Applied machine learning on real-world problems.

The Alan Turing Institute

Research and reports — Responsible and applied AI.

III ETHICAL AND RESPONSIBLE AI DEPLOYMENT

NIST

AI Risk Management Framework — Voluntary framework for managing AI risk.

European Commission

AI Act — Risk-tiered legal framework for AI.

Ethics Guidelines for Trustworthy AI — Principles for responsible development.

Partnership on AI

Research and best practice — Responsible AI development.

AI Now Institute

Annual reports — Social implications: power, inequality, rights.

ACM FAccT

Proceedings — Fairness, accountability and transparency.

Data & Society

Publications — Social implications of data-centric technology.

WIPO

Conversation on IP and AI — Intellectual-property implications of AI.

IEEE Global Initiative on Ethics of A/IS

Ethically Aligned Design — Recommendations for ethical AI design.

Center for AI and Digital Policy

Policy briefs — Accountable AI policy.