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Anchoring Ethical Technology (AI and data) Usage in the Education Practice

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Futures in Tension

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“Futures in Tension” is a sequence of ten illustrated cards that interrogate the promises and perils of educational technology. Each piece is conceived as a miniature thought-experiment: a richly symbolic tableau that exposes the ecological, social and political forces hidden inside everyday devices and platforms. The series was built through an iterative, hybrid workflow. I drafted high-level concepts, then generated base imagery in generative-AI tools best suited to the style—DALL·E 3 for painterly scenes, Midjourney v6 for collage-like compositions, Stable Diffusion XL for charcoal textures. Depth maps or upscaled PNGs were exported into Blender or Photoshop, where I modelled bespoke elements (fibre-optic cables, LEGO-style bricks), painted over details, applied gradient-map colour grading (project teal–magenta) and added analogue flourishes—chalk textures, water-colour bleeds, subtle grain. Inspirations range from Moebius and Studio Ghibli backgrounds to Hannah Höch collages and classic cinema chiaroscuro. Together, the cards invite educators, students and policymakers to reflect on power, equity and care before chasing the next upgrade.

Short summary:

Political Power An immense gavel built from smartphone screens hovers above doll-house classrooms; students' shadows trace circuit diagrams, hinting at unseen code that governs them. Gold data charts on the screens expose lobbying's grip on ed-tech policy. (Process: Midjourney raw pass, Illustrator vector trace, Gaussian-blur halo.) Global Inequality A glowing fibre-optic scale teeters: one pan sags under humming server racks, the other holds empty notebooks. The fragile cable threatens to snap, visualising the bandwidth gap between GPU-rich elites and paper-based learners. (Process: SD-XL concept, Blender emission cables, charcoal overlay.) Addiction & Dependency A Möbius conveyor of social-media windows loops endlessly around a weary teen, whose eyes mirror the cyan glow. Learning time dissolves into engagement metrics. (Process: Blender loop rig, DALL·E teen portrait, motion-blur pass.) Bias & Discrimination Five hyper-real portraits of one person morph through different skin tones as an "accuracy" slider shifts, exposing how algorithms rank faces by hidden norms. (Process: DALL·E seed-locked faces, Photoshop morph, UI overlay.) Cultural Impoverishment An ornate library shelves dissolve into regimented rows of pixel corn, every spine stamped with a blank QR code—an allegory of curriculum monoculture. (Process: DALL·E painterly base, gradient-map desaturation, Oil-Paint grain.) Ethics as Critical Inquiry On an anthracite board, a magnifying glass projects a logarithmic spiral of question-mark lenses over chalk equations, asserting that curiosity must interrogate even "settled" knowledge. (Process: Illustrator vector, transform-each recursion, chalk-texture multiply.) Mediation & Co-design Around a glowing round table, educators and students hand-stitch holographic data-fabric patches into a shared quilt, symbolising participatory technology-making. Dust motes glimmer in the workshop gloom. (Process: Blender emissive table, procedural cloth, painterly over-paint.) Ethics as Care Two gentle hands cradle a translucent circuit board from which magenta flowers bloom, blending circuitry and watercolor to honour maintenance, empathy and repair. (Process: Procreate water-colour brushes, opacity-reduced PCB, saturation pop.) Future Imagination In sunrise clouds, children and a small robot build translucent LEGO-block towers that emit soft data streams, portraying technology as an open-ended construction kit, not destiny. (Process: Blender glass bricks, god-rays in Photoshop, teal-magenta particle drift.)

1. Planetary Ruins

The concept of “planetary ruins” shines a light on the material footprint that every piece of educational technology leaves behind. From lithium extraction and cobalt mines to the mountains of discarded tablets and the power-hungry data centres that fuel generative AI, our tools of learning are embedded in a destructive supply chain that rarely features in syllabi or marketing brochures. By shrinking this global story into the familiar setting of a campus courtyard—half collapsed under its own ecological weight—the card reminds viewers that every upgrade is already tethered to damage elsewhere. The toxic mushrooms echo the uncanny growth of e-waste, and the drones cleaning micro-plastics ask whether “smart” solutions can keep pace with self-inflicted harm. In short, the card poses an uncomfortable question: not whether technology can enrich learning, but whether we can learn to live with its ecological debt.

Prompt:

Ultra-detailed isometric illustration of a half-collapsed university courtyard where textbooks sprout like toxic mushrooms; drones collect micro-plastics swirling in the air; palette of desaturated earth tones with flashes of neon pink glitch; style of Moebius meets Studio Ghibli, 4K, posterized shading.

Creative process:

I started in DALL·E 3, feeding the prompt shown above and requesting four variations at 4 K resolution. I chose the version whose sight-line drew the eye from foreground debris to distant collapsed arches, leaving breathing room for possible future captions. Once exported as PNG, I opened the file in Photoshop and replaced the sky with a royalty-free smog gradient, Soft Light 50 % opacity, to avoid crushing mids.

2. Political power

Educational technology is never neutral: licenses, data pipelines and algorithmic rules embed political decisions that shape what, how and for whom learning happens. The hovering gavel made of smartphone screens symbolises the regulatory and corporate power wrapped inside everyday devices; miniature classrooms beneath it visualise how policy choices filter down to lesson plans and grade books. Circuit diagram shadows hint at hidden logic that decides visibility or exclusion, while the blue grey/anthracite palette conjures legal steeliness. The gold accents, meanwhile, recall the profit streams that often determine which “innovations” reach classrooms first. Together these elements bring power structures onto the stage, urging educators and students to notice the room above their heads—and to push for transparency, contestability and common good governance. The card does not reject platforms outright; it simply makes space to demand democratic accountability in EdTech ecosystems.

Prompt:

Surreal collage: a giant gavel made of smartphone screens hovers over miniature classrooms; students' shadows are circuit diagrams; muted blue-grey palette with gold accents; style reminiscent of Hannah Höch digital cut-outs, 8K resolution.

Creative process:

I began in Midjourney v6 with the prompt above plus the switch "--style raw" to avoid heavy stylisation. After eight iterations I selected the composition in which the gavel occupies the upper third, creating a natural power imbalance in the frame. Midjourney's upscaler produced an 8 K PNG, which I imported into Illustrator and ran through *Image Trace* at 12 colours to vectorise the gavel for further editing.

3. Global Inequality

Global access to educational technology is profoundly uneven: while a handful of wealthy campuses spin up GPU clusters for real-time AI tutors, learners in many regions still share a single outdated computer or rely on photocopied notes. Building the concept into a fragile balance scale forged from glowing fibre-optic cables makes inequality tangible and precarious—if the heavy server pan keeps loading, the cable will snap and both sides will crash. The dim chiaroscuro lighting is a reminder that the situation often stays in the dark until policy failures finally break the system. The card invites educators to weigh each new hardware rollout against the opportunity cost elsewhere and to think of international partners not as beneficiaries but as co-owners of digital futures.

Prompt:

Conceptual balance scale made of glowing fibre-optic cables: one pan overloaded with humming server racks, the other with empty paper notebooks; dim background, chiaroscuro lighting; style of cinematic photography meets charcoal sketch, 6K.

Creative process:

I created the first draft in Stable Diffusion XL with the prompt above, requesting a 4 K output and setting CFG 8 to keep details tight. After identifying a seed with balanced composition, I exported the depth map and moved into Blender. There I constructed curves that matched the cable path and converted them into mesh tubes textured with an emission shader (hex #00FFEE at 20 % strength) plus a subtle noise bump to mimic braided fibres.

4. Addiction & Dependency

Compulsive design patterns—endless scroll, autoplay lessons, badge streaks—can transform tools intended for learning into attention traps. The card stages a teenage student on an infinite conveyor belt made of social media windows that circle back on themselves, turning curiosity into fatigue. Translucent panes signal how the mechanics of seduction are usually invisible, yet their glow is reflected in the student's eyes, suggesting internalised rhythms of notification and reward. The cyber noir palette evokes late night binge usage, while the looping belt references industrial time and motion studies, implying that human focus is being fed to machines. By freezing the loop in a still frame, the card asks whether we notice when learning moments become mere engagement metrics, and challenges teachers to design interventions that break, rather than reinforce, dependency cycles.

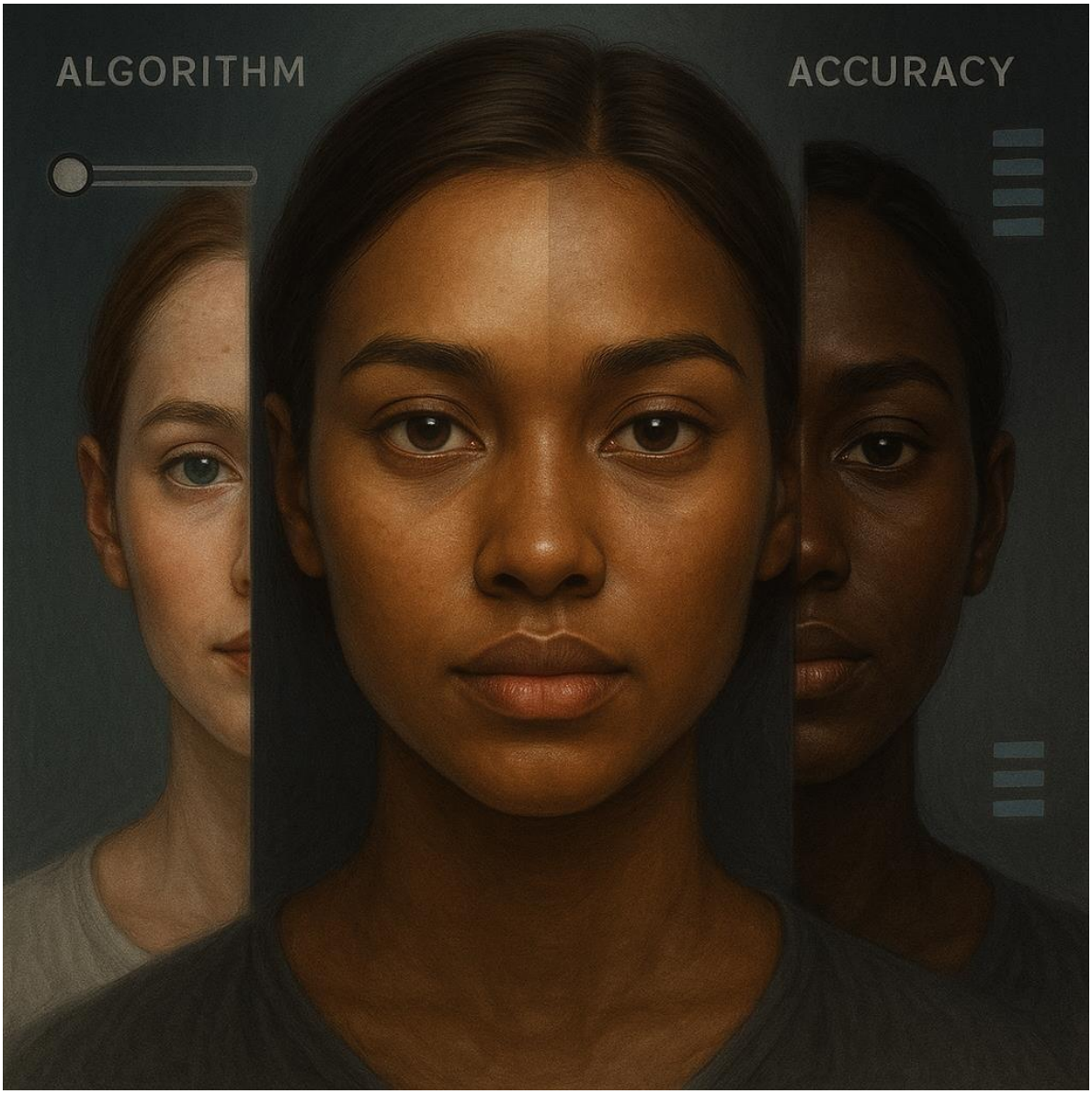
Prompt:

Infinite conveyor belt feed made of translucent social-media windows loops around a teenage student seated at a desk; student's eyes reflect endless scrolling; cyber-noir palette with saturated cyan highlights; 3D render mixed with cel-shading, 4K.

Creative process:

I built a low-poly conveyor belt in Blender, array-modelling half-pipes arranged in a Möbius loop so the feed has no exit. Screenshots of popular social apps were placed onto translucent planes using UV projection with Emission shaders to simulate screen glow. The student character was generated separately in DALL·E 3 ("teen sitting at desk, neon cyan rim light, contemplative expression").

5. Bias & Discrimination



Algorithms can amplify social prejudice when the data that trains them or the objectives that steer them are skewed. In this portrait sequence, the same face morphs through multiple skin tones while an on-screen slider claims to optimise “accuracy,” exposing how subjective categories are masked by technical language. Accuracy bars that jump taller or shorter as tones shift remind viewers that statistical performance often serves as a proxy for normative judgments about who counts, and who can safely remain unseen. By highlighting a single mutable face, the card makes discrimination personal, not abstract, and hints at intersectional factors—age, gender, accent—that would compound the injustice. The viewer is invited to question default settings: if a single face can be reconfigured to meet shifting metrics, perhaps the metrics—not the person—demand scrutiny.

Prompt:

Portrait sequence: same face morphs through multiple skin tones as an on-screen algorithm slider is dragged; background UI shows accuracy bars shifting; hyper-realistic digital painting, smooth transitions, 8K.

Creative process:

I generated 3 high-resolution portraits in DALL·E 3—same facial geometry, 3 distinct skin tones—by fixing the seed and altering only the descriptor of complexion. I batch-exported the images as TIFFs and imported them into After Effects.

6. Cultural Impoverishment

When recommender systems and content marketplaces reward engagement above all, classrooms risk converging on the same handful of lowest friction resources, gradually replacing the messy diversity of cultures and languages with a monocrop of homogenised material. In the card, a grand library morphs into endless rows of pixel corn—identical books tagged only by blank QR codes—illustrating how optimisation can empty learning of context and texture. The warm sunset hints at natural beauty, yet the desaturated palette and rigid grid signal that colour and nuance have been algorithmically drained. A thin line of living greenery remains on the horizon, a final warning that curricular ecosystems can still be saved if educators choose polyculture over convenience. The card calls readers to cultivate curricular biodiversity before the shelves finish turning into sterile rows.

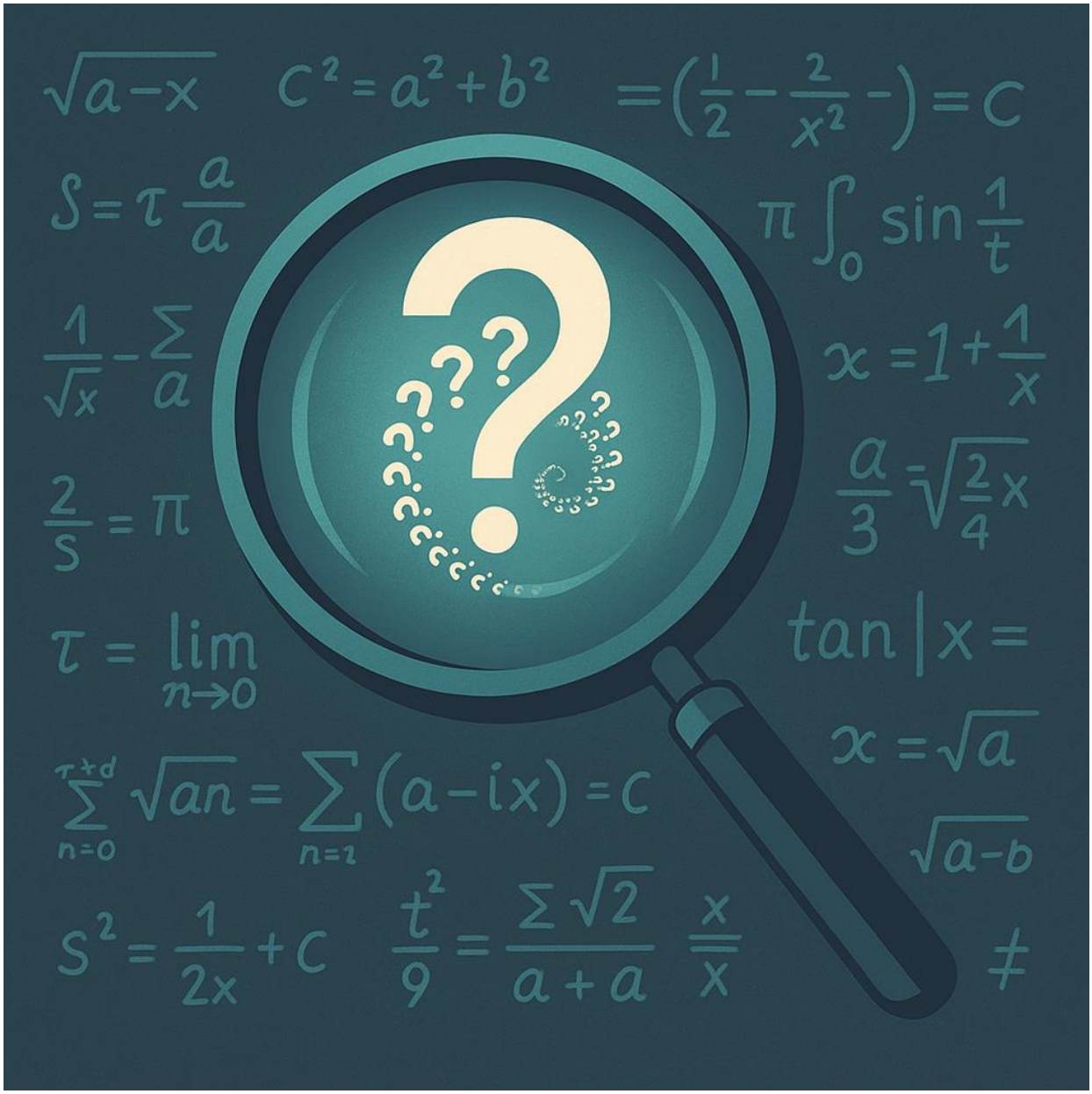
Prompt:

Vast library morphs into a monoculture field of pixel corn, shelves replaced by endless rows of identical books with blank QR codes; warm sunset but desaturated tones; painterly realism inspired by Hayao Miyazaki backgrounds, 5K.

Creative process:

The base image was produced in DALL·E 3 with the prompt above at 4 K resolution, explicitly instructing a Hayao-Miyazaki-inspired painterly background. To align with series colours I created a teal-magenta Gradient Map set to Soft Light 25 %, and selectively desaturated reds. A mild *Oil Paint* filter added subtle brush strokes, connecting digital and analogue aesthetics.

7. Ethics as Critical Inquiry



Ethics, at its core, is a disciplined habit of questioning—one that spirals inward as knowledge grows rather than resolving into a final checklist. This card projects a magnifying glass onto a chalkboard filled with equations; inside the bright circle, a fractal of question marks appears, each containing smaller lenses in a recursion without end. The limited colour scheme—teal strokes on anthracite—references the project palette while leaving space for chalk dust textures that evoke classroom practice. By letting punctuation override formulae, the composition argues that curiosity should interrogate even what feels settled or certain. The image insists that ethical reflection must be woven into disciplinary work, not appended as a disclaimer at the end of a syllabus; otherwise, the glass magnifies nothing but its own surface.

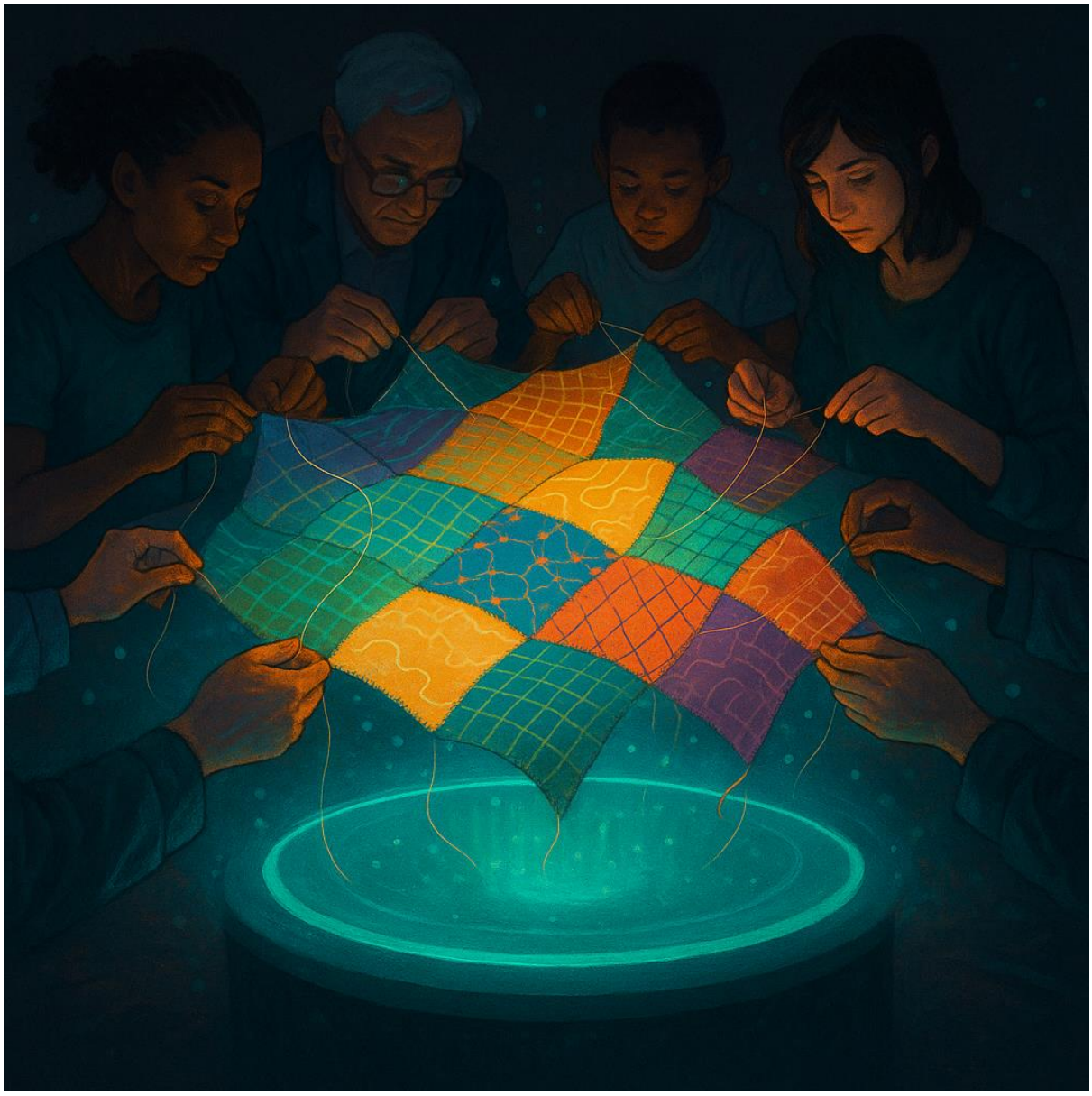
Prompt:

Magnifying glass projects fractal question marks onto a chalkboard filled with complex equations; each question mark recursively contains smaller lenses; limited palette, teal and off-white on anthracite background; vector-flat style with subtle drop shadows.

Creative process:

I drew the entire composition in Adobe Illustrator. Starting with a simple circle, I converted it into a magnifying-glass shape using the *Warp* > *Bulge* tool, then duplicated the object maaaany times. With *Transform Each* I reduced scale by 70 % and rotated 15° per iteration, enabling a logarithmic spiral that suggests infinite depth. The question-mark glyph was hand-lettered using a variable-width brush, expanded, outlined, and placed inside every alternate lens to avoid clutter.

8. Mediation & Co-design



Responsible technology does not arrive pre-assembled; it is stitched together through dialogue among the people who will teach, learn and maintain it. In this scene, educators and students stand around a holographic round table, piecing colourful data-fabrics into a single quilt that floats in mid-air. The soft particles swirling in the dark workshop suggest both creativity and the messy uncertainty of co-design. Each patch carries its own weave, symbolising disciplinary diversity: sociology patterns interlock with computer science fibres, art textures back mathematics grids. By giving the fabric its own glow, the card stresses that context and meaning emerge from collaboration, not from black-box tools handed down by vendors. Only when stakeholders sew technology into local narratives does it hold together.

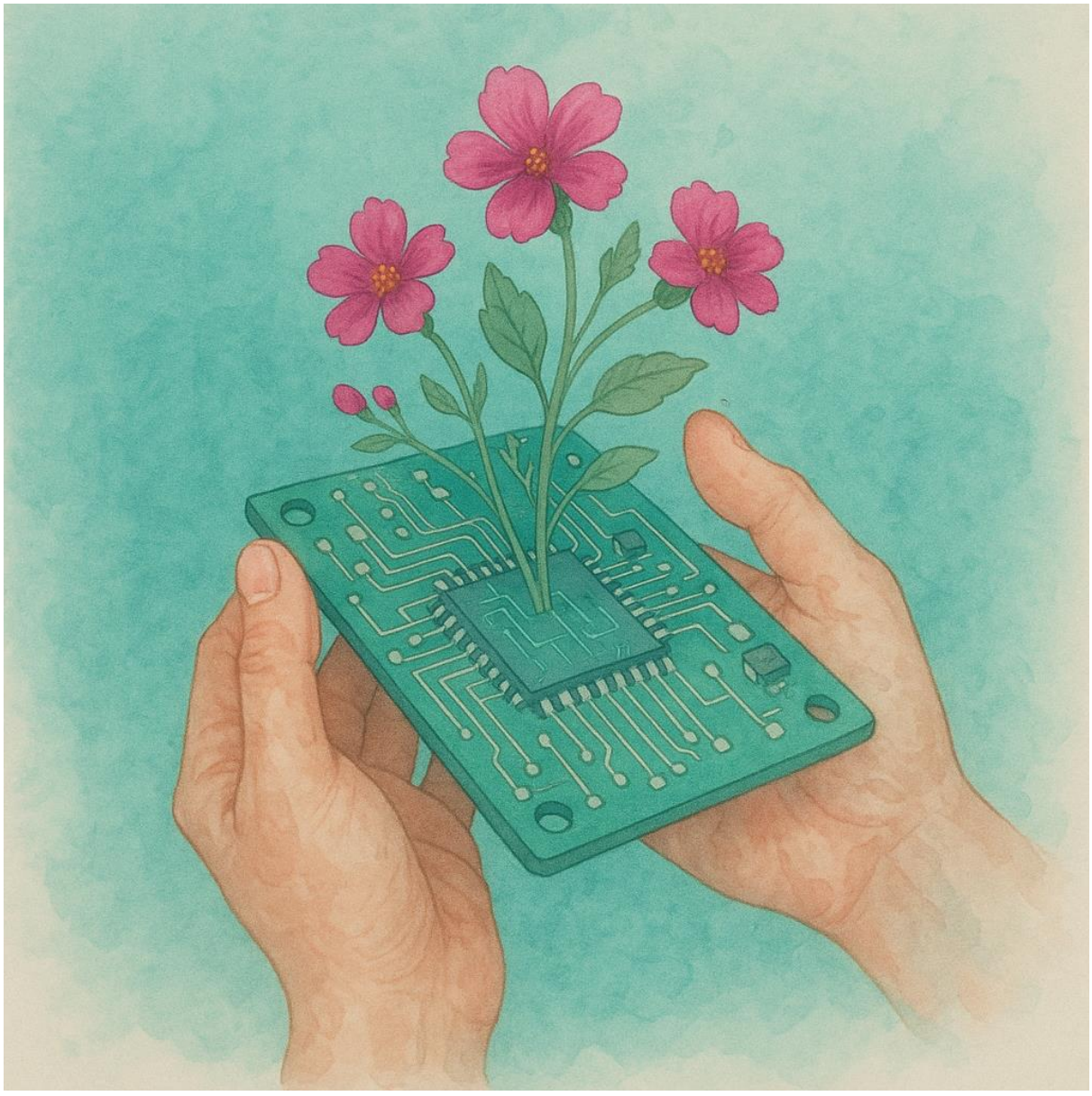
Prompt:

Round holographic table in a dark workshop where diverse educators and students stitch colourful data-fabric pieces into a shared quilt; dynamic lighting, soft particles floating; photorealistic 3D with painterly overpaint, 6K.

Creative process:

I blocked the environment placing eight human figures in half-lit poses around a circular table set as an emissive object. I generated procedural cloth patches using the Cloth Surface modifier and applied vertex colour gradients sampled from project teal and magenta. A volumetric spotlight generated floating dust which I cached to reduce render noise.

9. Ethics as care



Ethics as care foregrounds relationships and vulnerability—values often ignored by data dashboards. Two gentle hands cradle a fragile circuit board sprouting flowers, showing that technical infrastructure can be tended like a garden rather than mined for output. Watercolour textures blur the line between nature and circuitry, suggesting that well being arises when human support and digital systems are cultivated together. The pastel teal background keeps the mood calm, while magenta blooms signal vitality. By spotlighting care work—maintenance, listening, patient iteration—the card challenges the heroic myth of disruption and reminds viewers that sustainable innovation depends on the people who keep technology alive after launch. Empathy and ongoing stewardship are as critical as breakthrough ideas within educational technology.

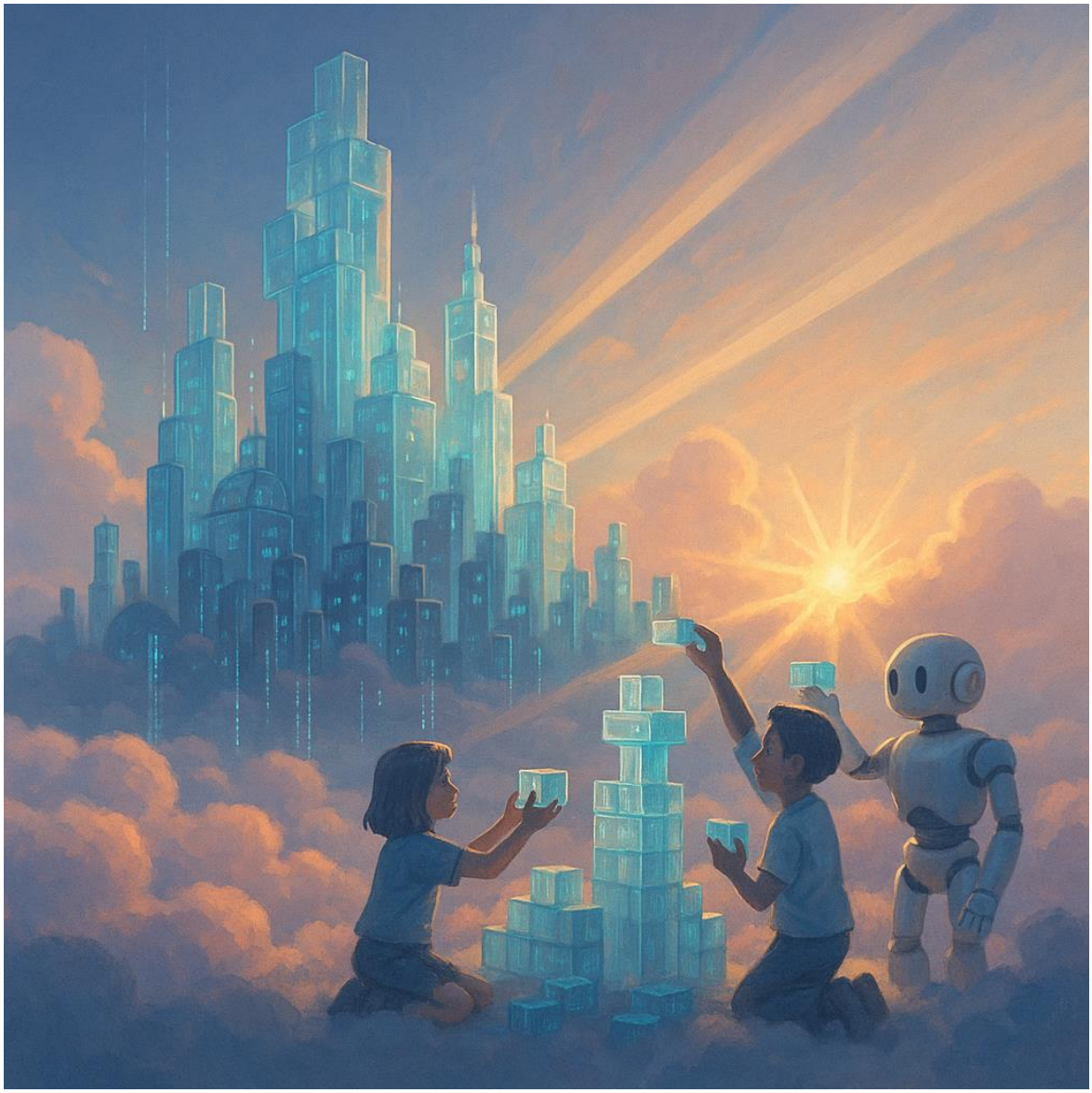
Prompt:

Close-up of two hands gently cradling a fragile circuit board sprouting delicate flowers; watercolor digital painting with soft edges and minimal line art; pastel teal background with magenta bloom accents; 4K.

Creative process:

I painted the base composition in Procreate on a 4 K canvas using *MaxPack Watercolor* brushes. The hand outlines were traced from a CC0 reference photo, then softened with a wet-edge eraser. In Procreate I enabled Brush Bleed at 15 % to create organic pigment diffusion.

10. Future Imagination



The final card celebrates future imagination: the capacity to design learning environments we cannot yet fully describe. A translucent skyline built from LEGO-like blocks floats above clouds, assembled in real time by children and robots working side by side. The scene invites viewers to see technology not as destiny but as construction kit: modular, transparent, ready to be taken apart and rebuilt. Dawn light casts long rays, signalling that the work is only beginning, while faint data streams drifting upward hint at infrastructures engineered for accountability and care—in stark contrast to the opaque pipelines of today. By letting the pieces remain partially open-ended—some bricks hover waiting for connection—the image argues that ethical futures must remain revisable, welcoming new builders as contexts and values evolve. Hope is framed as a collaborative, continuous project.

Prompt:

Dream-like skyline floating above clouds, built from translucent LEGO-like blocks emitting faint data streams; children and robots collaboratively assemble new towers; bright dawn light with rays; semi-realistic matte painting, 8K.

Creative process:

I kit-bashed a set of translucent LEGO-style bricks in Blender using a Boolean workflow to hollow each block, then applied a Glass BSDF shader with dispersion set to 0.015 to catch spectral highlight. In Photoshop I performed matte painting: extending cloud banks with custom cloud brushes, painting god-rays via a white soft round brush plus Radial Blur (zoom 15 %).