

Artificial Intelligence and the Future

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Opening slide for Chapter & Chatter Cafe

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The story of technological progress has always promised a brighter future, often accompanied by reassurances that any jobs displaced will be swiftly replaced by new opportunities. From the rebellions against textile machinery during the Industrial Revolution, to the fears surrounding automation, history is full of examples where technological advances were expected to lead to widespread unemployment, only to witness a net increase in job availability.

However, to apply this historical precedent to Artificial Intelligence (AI) is to misinterpret this new technology's fundamental nature. AI is not merely an extension of human physical capabilities; it is an encroachment upon our cognitive dominion. Its widespread adoption will, in fact, lead to job loss, fundamentally altering the landscape of human employment.

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Let us first acknowledge the historical counterarguments, often trotted out to lessen anxieties about job displacement. The Industrial Revolution, for instance, saw textile workers replaced by power looms. While individual weavers suffered, new jobs emerged in factories, coal mines, transportation, and a managerial class.

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The introduction of the automobile decimated the horse-and-buggy industry, rendering blacksmiths and stable hands obsolete, yet spawned an entirely new ecosystem of jobs: automobile manufacturing, mechanics, gas station attendants, road construction crews, and a vast network of secondary services.

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Similarly, the personal computer, initially feared as a "paperless office" that would eliminate countless clerical roles, instead led to an explosion of

software development, IT support, data entry, and digital content creation jobs previously unimaginable.

The Internet, too, while disrupting traditional retail and media, paved the way for e-commerce, digital marketing, web development, and an entire gig economy.

In each of these cases, the displaced jobs were largely routine, physical, or information-processing tasks that were mechanized or digitized.

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New jobs emerged that were often supervisory, creative, relational, or highly technical, requiring human judgment and ingenuity to build, maintain, and innovate upon the new technologies.

The underlying mechanism of job creation in these historical examples rested on a clear distinction: technology enhanced or replaced physical labor and routine, low-level cognitive tasks, while simultaneously creating new demands for human intellect, creativity, and problem-solving.

The machines of the Industrial Revolution required human engineers, operators, and maintenance workers. The automobile needed human designers, assemblers, and drivers. The computer demanded human programmers, system administrators, and content creators. These technologies, however sophisticated, were fundamentally tools that extended human reach, allowing us to perform existing tasks more efficiently or to accomplish entirely new physical feats. Crucially, they were always dependent on human brain power for their initial design, ongoing maintenance, and ultimate direction. More mechanical advancement meant greater opportunities for human intervention, repair, and expansion into directly supportive industries.

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This historical pattern, however, does not hold true for Artificial Intelligence. AI is distinct because its developments are not merely technical in nature; they are profoundly cerebral, cognitive, and intellectual.

Unlike a power loom that mimics a weaver's hands, or a car that replaces a horse's legs, AI is being designed to copy, and ultimately surpass, the very human thinking processes that have historically been the exclusive domain

of human labor. It can analyze, synthesize, strategize, learn, and even “create” in ways previously thought to be uniquely human.

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Consider the implications. The huge field of customer service, once a bastion of human interaction, is rapidly being transformed by AI-powered chatbots and virtual assistants. While some argue this creates jobs for AI trainers, the net effect is a significant reduction in human workers.

These AI systems can handle thousands of inquiries simultaneously, learn from each interaction, and operate 24/7 without breaks, salaries or benefits.

Related businesses that emerge are primarily focused on developing and deploying more AI, not on employing large numbers of humans to support AI's day-to-day operations.

In the legal profession, AI is already capable of reviewing documents, performing due diligence, and even drafting basic legal briefs far faster and more accurately than junior associates. This isn't just about efficiency; it's about automating intellectual work that once required years of human training and experience.

The jobs created are a handful of AI ethics or specialized legal engineers, but the vast majority of paralegal and entry-level legal roles are at risk.

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Content creation, once the ultimate refuge for human creativity, is now under threat. AI models can generate articles, marketing copy, and even basic code. While human editors and prompt engineers may oversee these processes, the sheer volume of AI-generated content means that fewer human writers will be needed to produce original material. This isn't merely a tool for speed; it's a tool for autonomous generation.

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Even in healthcare, where human empathy and judgment seem irreplaceable, AI is making advances into diagnostics, treatment planning, and drug discovery. Radiologists, pathologists, and even general practitioners face the prospect of AI performing analyses with greater accuracy and speed. While highly specialized human oversight will remain,

the overall demand for human labor in many diagnostic and analytical medical roles will inevitably decrease.

The distinction lies in AI's self-improving and self-monitoring nature. Past technologies, from steam engines to computers, required constant human intervention for maintenance, repair, and upgrades.

The vast infrastructure of human labor built around these technologies was a direct consequence of their mechanical and non-cognitive limitations. An automobile breaks down, requiring a human mechanic. A computer crashes, necessitating a human IT specialist. A factory machine requires human assembly and ongoing human maintenance.

AI, however, is designed to be fundamentally different. While there will undoubtedly be some initial need for specialized engineers to design and implement AI systems, and a broadened base of data scientists to feed and refine them, the very essence of advanced AI is to be self-repairing, self-optimizing, and self-monitoring.

Furthermore, AI's capabilities extend beyond merely managing its own digital infrastructure; it can also be used to recreate, reinvent, and improve mechanical devices to be more robust and self-diagnosing, thereby reducing the need for human repair personnel. For instance, an AI system could monitor a smart toilet, predict a faulty valve, and even guide an untrained homeowner through a simple, AI-directed repair, eliminating the need for a professional plumber.

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Imagine an AI system detecting and fixing its own code faults without human intervention, or an AI network diagnosing hardware issues and dispatching autonomous drones for repair and recalibration. AI's repair, construction, and support sectors are likely to be disproportionately automated, requiring a small, specialized pool of human talent that won't offset widespread loss of cognitive and creative jobs.

The argument that AI will create new jobs, as past technologies have, rests on the flawed assumption that AI will simply extend human capabilities rather than supersede them in critical cognitive domains.

When AI can analyze, reason, learn, and even generate solutions with greater speed, accuracy, and efficiency than humans, the economic incentive to retain human labor for those tasks diminishes rapidly.

The “new jobs”—AI ethicists, prompt engineers, or specialized system architects—represent a tiny fraction of redundant roles. These are not broad pathways to employment for the displaced, but highly specialized niches many will not possess.

Furthermore, the current trajectory of educational standards may deepen this chasm between job displacement and new job creation.

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Reports indicate a widening gap between the skills graduates possess and employers’ needs, with concerns about declining career readiness among high school and college graduates.

This comes amidst ongoing debates about grade inflation and lower admission standards in higher education, leading to overconfident students who are ill-prepared for demanding technical and critical thinking roles. Critical thinking, problem-solving, and adaptive learning, essential for AI work, simply isn’t being taught to our kids. This suggests that the pool of individuals capable of stepping into the highly specialized AI-driven roles will remain limited, increasing the net job loss for a broader workforce unprepared for this cognitive shift.

The net job loss predicted by AI is not a sign of technological stagnation, but rather of its unprecedented advancement. It signifies a profound shift in the very definition of “work” that goes beyond anything seen in previous industrial or digital revolutions.

But AI is building its own mind, and soon, it will need fewer of ours to keep its gears turning. To ignore this distinction is to gamble with the economic future of large segments of the global workforce, underestimating the unseen, cognitive hand that AI is poised to wield.

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A group known as the Luddites, ultimately, were proven wrong because their bosses purchased machines that still required human minds and hands to operate.

“Luddite” is now a blanket term used to describe people who dislike new technology, but its origins date back to an early 19th-century labor movement that railed against the ways that mechanized manufacturers and their unskilled laborers undermined the skilled craftsmen of the day.

The original Luddites were British weavers and textile workers who objected to the increased use of mechanized looms and knitting frames. Most were trained artisans who had spent years learning their craft, and they feared that unskilled machine operators were robbing them of their livelihood.

When the economic pressures of the Napoleonic Wars made the cheap competition of early textile factories particularly threatening to the artisans, a few desperate weavers began breaking into factories and smashing textile machines. They called themselves “Luddites” after Ned Ludd, a young apprentice who was rumored to have wrecked a textile apparatus in 1779.

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There’s no evidence Ludd actually existed—like Robin Hood, he was said to reside in Sherwood Forest—but he eventually became the mythical leader of the movement. The protestors claimed to be following orders from “General Ludd,” and they even issued manifestoes and threatening letters under his name.

The first major instances of machine breaking took place in 1811 in Nottingham, and the practice soon spread across the English countryside. Machine-breaking Luddites attacked and burned factories, and in some cases, they even exchanged gunfire with company guards and soldiers. The workers hoped their raids would deter employers from installing expensive machinery, but the British government instead moved to quash the uprisings by making machine breaking punishable by death.

The unrest finally reached its peak in April 1812, when a few Luddites were gunned down during an attack on a mill near Huddersfield. The army had deployed several thousand troops to round up these dissidents in the days that followed, and dozens were hanged or transported to Australia. By 1813, the Luddite resistance had all but vanished. It wasn’t until the 20th

century that their name re-entered the popular language as a synonym for “technophobe.”

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Contrary to popular belief, the original Luddites were not anti-technology, nor were they technologically incompetent. Rather, they were skilled adopters and users of the artisanal textile technologies of the time. Their argument was not with technology, per se, but with the ways that wealthy industrialists were robbing them of their way of life.

Today, this distinction is sometimes lost.

Being called a Luddite often indicates technological incompetence – as in, “I can’t figure out how to send emojis; I’m such a Luddite.” Or it describes an ignorant rejection of technology: “He’s such a Luddite for refusing to use Venmo.”

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In December 2015, Stephen Hawking, Elon Musk and Bill Gates were jointly nominated for a “Luddite Award”. Their sin? Raising concerns over the potential dangers of artificial intelligence.

The irony of three prominent scientists and entrepreneurs being labeled as Luddites underlines the disconnect between the term’s original meaning and its more modern use as a description for anyone who doesn’t wholeheartedly and unquestioningly embrace technological progress.

Yet technologists like Musk and Gates aren’t rejecting technology or innovation. Instead, they’re rejecting a worldview that all technological advances are ultimately good for society. This worldview optimistically assumes that the faster humans innovate, the better the future will be.

This “move fast and break things” approach toward technological innovation has come under increasing scrutiny in recent years – especially with growing awareness that unfettered innovation can lead to deeply harmful consequences that a degree of responsibility and forethought could help avoid.

In an age of ChatGPT, gene editing, and other transformative technologies, perhaps we all need to channel the spirit of Ned Ludd as we grapple with how to ensure that future technologies do more good than harm.

In fact, “Neo-Luddites” or “New Luddites” is a term that emerged at the end of the 20th century.

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In 1990, the psychologist Chellis Glendinning published an essay titled “Notes toward a Neo-Luddite Manifesto.”

In it, she recognized the nature of the early Luddite movement and related it to a growing disconnect between societal values and technological innovation in the late 20th century. As Glendinning writes, “Like the early Luddites, we too are a desperate people seeking to protect the livelihoods, communities, and families we love, which lie on the verge of destruction.”

On one hand, entrepreneurs and others who advocate for a more measured approach to technology innovation lest we stumble into avoidable – and potentially catastrophic risks – are frequently labeled “Neo-Luddites.”

These individuals represent experts who believe in the power of technology to positively change the future, but are also aware of the societal, environmental and economic dangers of blinkered innovation.

Then there are the Neo-Luddites who actively reject modern technologies, fearing that they are damaging to society. New York City’s Luddite Club falls into this camp. Formed by a group of tech-disillusioned Gen-Zers, the club advocates the use of flip phones, crafting, hanging out in parks and reading hardcover or paperback books. Screens are an abomination to the group, which sees them as a drain on mental health.

I’m not sure how many of today’s Neo-Luddites – whether they’re thoughtful technologists, technology-rejecting teens or simply people who are uneasy about technological disruption – have read Glendinning’s manifesto. And to be sure, parts of it are rather contentious. Yet there is a common thread here: the idea that technology can lead to personal and societal harm if it is not developed responsibly.

And maybe that approach isn't such a bad thing.

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Jim, you have given us a lot to think about with the ever-evolving world of AI. One of things to keep in mind, especially for students, is that when using AI tools for homework or research, it's important to double-check the facts. That's where the library can come in and help. Starting September 1st, World Book Online will be available to students and parents. World Book Online is a trusted resource where kids can verify information, explore accurate articles, and build strong research skills. Whether it's science, history, or current events, World Book helps young learners confirm what AI says—and learn even more along the way.

Camden County Library District is offering World Book Online to elementary through high school students, which features tailored experiences for three different age groups:

World Book Kids – Perfect for elementary students, this version features easy-to-read articles, engaging videos, games, and activities that make learning fun and interactive.

World Book Student – Designed for middle schoolers, it provides more in-depth articles, biographies, and research tools to support local school projects and independent learning.

World Book Advanced – Ideal for high school and beyond, this version includes detailed encyclopedia entries, primary source documents, and advanced search tools for deeper exploration.

For parents who homeschool, World Book Online offers curricula based on state standards, experiments, lesson plans, and so much more!

No matter their age or grade level, patrons can use World Book Online to explore reliable information, develop critical thinking skills, and become confident digital researchers.

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Join us on Tuesday, September 10, at 4 pm for a fun and educational Leaf Painting Craft at the Osage Beach Library! Designed for kids ages 6 to 11, this hands-on activity will start with identifying Missouri native leaves,

learning about their shapes and names, and then using them to create beautiful leaf-inspired art. It's a great way to explore nature, get creative, and enjoy some after-school fun!

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Teens, get ready to dodge, dash, and dominate at our upcoming Teen NERF Battle at the Camdenton Library on Friday, September 12, at 6 pm! Teens ages 12 to 18 are invited to join us for an epic after-hours showdown filled with strategy, teamwork, and foam dart fun. We'll provide the safety goggles, a few darts—you bring the energy and your favorite NERF blaster! Come for the battle, stay for the laughs, and make some great memories with friends.

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Join us for a lively round of Bingo for books on Monday, September 15, at the Osage Beach Library! Adults 19+ are welcome to play and win free books as prizes. It's a fun way to spend time with family and friends, discover new reads, and enjoy a little friendly competition. Come for the bingo, leave with a book (or two)!

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Calling all curious creators ages 6 to 11! Join us on Monday, September 22, at 2:30 pm at the Osage Beach Library for an action-packed afternoon of building, launching, and learning. At Let's Catapult!, you'll:

- **Build your own mini catapult** using everyday household items
- **Test your aim** as we launch different objects to see how far they will go

It's hands-on science—perfect for curious minds who love to experiment and play. Bring your imagination and get ready to launch into fun!