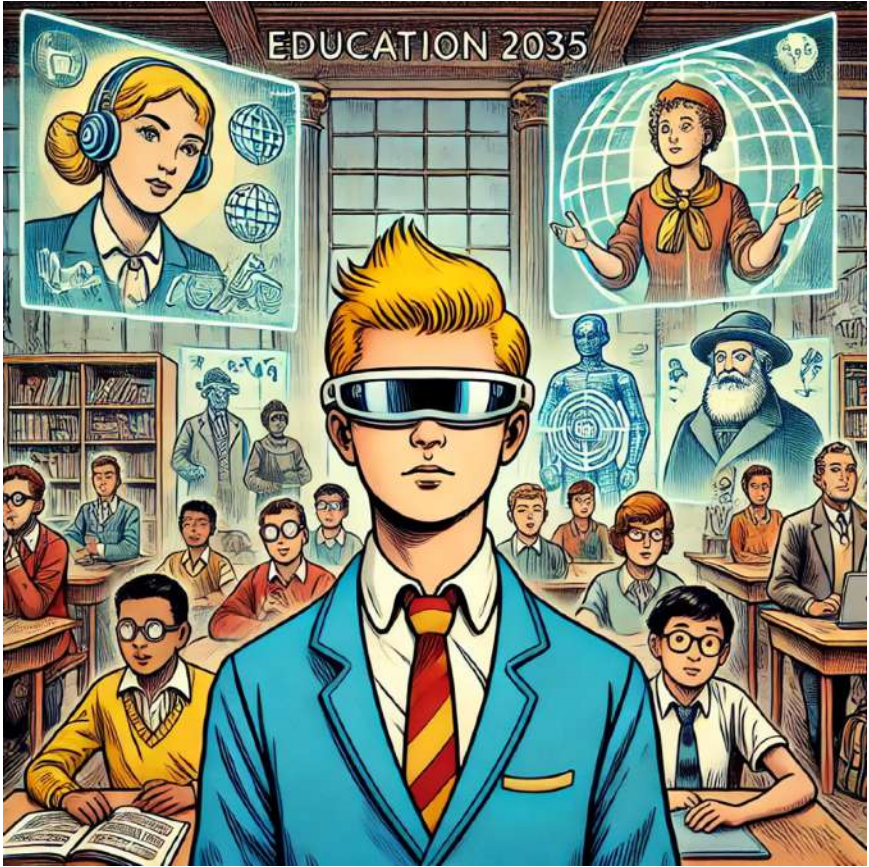


EDUCATION 2035



ARSHAD HISHAM

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Dedication

To the epic tales and boundless universes that ignited my imagination, this series is dedicated to the visionary worlds of Battlestar Galactica, Isaac Asimov's Foundation series, and Star Trek.

Your narratives have not only entertained but have also inspired countless hours of daydreaming and late-night musings about AI, space exploration, and the future of humanity.

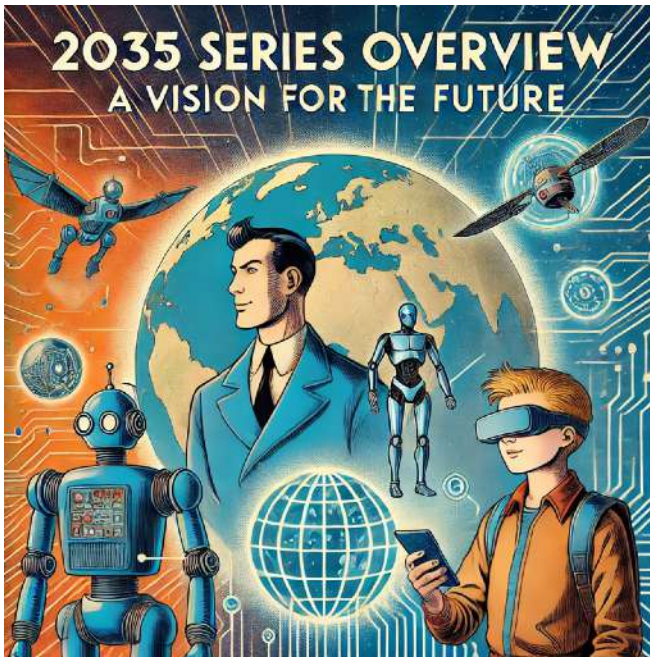
Your intricate world-building has taught me that no detail is too small, no plot twist too grand. May this series honor your legacy and spark the same curiosity and wonder in others that you have kindled in me.

To my incredible family—my wife, whose patience and support know no bounds, even when I rambled about Cylons and warp drives; my children, whose questions about robots and space made bedtime stories an adventure of their own and sometimes more complicated than a quantum physics lecture; my parents, for encouraging my love of science fiction from a young age and not minding when I turned the living room into a command center; and my in-laws, for always cheering me on, even when I explained the plot of my latest book at family dinners. A special shout-out to my friends and the brilliant minds at InGen Dynamics—thank you for tolerating my endless geeky references, my tendency to speak Klingon during meetings, and for being my partners in turning sci-fi dreams into reality.

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THE 2035 SERIES: A VISION FOR THE FUTURE

Introduction: Envisioning 2035



By 2035, the fabric of daily life was unrecognizable to anyone who had lived through the early years of the 21st century. The convergence of artificial intelligence, robotics, automation, and reimagined education systems had turned the ordinary into the extraordinary. Yet, this future was not born from the seamless implementation of technology alone. It had emerged from years of debate, trial, and error—a battle between innovation and the preservation of humanity's most vital qualities.

Picture this: in a remote Kenyan village, Amina places a lightweight augmented reality headset on her daughter, who is eager to begin her virtual lesson on the ancient civilizations of Mesopotamia. Thousands of miles away in Silicon Valley, a robotics engineer named Aaron remotely supervises an AI-driven manufacturing plant in Kuala Lumpur, watching in real-time as robotic arms assemble intricate components faster and more precisely than any human team ever could. Meanwhile, deep in Antarctica, a fleet of autonomous drones collects climate data, predicting patterns that could mitigate the devastating effects of global warming.

In many ways, the story of 2035 is one of connection—between humans, between nations, and between humanity and the intelligent systems we've built to assist us. But that connection wasn't always smooth. To appreciate the world of 2035, one must first rewind to the inflection points that defined its trajectory. These moments were marked not by technological marvels alone, but by the choices humanity made in response to them.

Historical Turning Points: The Road to 2035

The seeds of this new world were planted in the 20th century. In 1961, General Motors introduced Unimate, the first industrial robot, into its assembly line. It was an unwieldy, clunky machine by modern standards, yet it symbolized a fundamental shift: machines that didn't just assist humans but began to replace them in repetitive, hazardous tasks.

By 2011, IBM's Watson made headlines for defeating two human champions on the quiz show Jeopardy! This wasn't merely an entertainment spectacle. It was a moment when artificial intelligence demonstrated its ability to process and understand vast amounts of unstructured information, laying

the groundwork for the AI revolution of the following decades.

Then came 2023, a year that historians would later call the “Generative Leap.” OpenAI’s language models, Google’s DeepMind advancements, and breakthroughs in generative design allowed machines to create in ways previously thought to be uniquely human. These developments didn’t just enhance industries; they redefined what machines—and by extension, humans—were capable of.

But for all the promise these innovations brought, they also highlighted the tensions inherent in rapid technological change. By 2025, debates about AI governance, the role of automation in job displacement, and the ethical dilemmas surrounding autonomous systems had reached a fever pitch.

In the United States, for example, the introduction of self-driving freight vehicles sparked protests across the trucking industry, displacing hundreds of thousands of drivers. In India, an experimental AI-led irrigation system saved millions of gallons of water during one of the country’s worst droughts, proving how automation could solve global challenges.

And in Japan, where an aging population strained social systems, humanoid robots filled roles as caregivers, offering companionship and support to the elderly. These events were not isolated—they were snapshots of a world adapting to forces that simultaneously empowered and challenged it.

The Four Pillars of the 2035 Series

This book series delves into four interlocking areas where the most profound transformations unfolded: artificial intelligence, automation, robotics, and education. Each area brought unique challenges, yet their integration defined the story of humanity’s future.

Artificial Intelligence: The Brain of the Future

AI became the brain powering industries, homes, and even individual lives. It analyzed patterns in everything from healthcare to climate change, offering solutions that were as precise as they were scalable.

Automation: Efficiency Redefined

Automation eliminated drudgery but also transformed the very concept of work. By 2030, over 50% of the world's agricultural output was managed by AI-driven systems. Yet, this efficiency came with trade-offs. In rural Kansas, farmers who once toiled in fields now monitored drone fleets from control hubs. Their pride in production was tempered by a longing for the tactile connection they once had with their land.

Robotics: Partners and Pioneers

Robots didn't just fill gaps in labor; they explored frontiers humans couldn't. From the deep seas to the surface of Mars, robots acted as our hands and eyes in places we could not go. Yet, their presence also raised questions. When an autonomous rover made a critical error during a Europa mission in 2029, it sparked a global debate about accountability in robotic decision-making.

Education: Learning Reimagined

Education became the linchpin of adaptation. By 2035, immersive AR and VR classrooms brought the world's knowledge to every corner of the globe. A child in Guatemala could explore the Pyramids of Giza alongside a classmate in Singapore, yet disparities remained. The digital divide persisted, and debates over data privacy in AI-driven education systems underscored the need for vigilance.

The Human Element: Why This Series Matters

While these advancements may sound like the triumph of machines, they are, at their core, a testament to humanity's resilience and adaptability. This series isn't just about technology; it's about the people who shape and are shaped by it. It's about Priya, an AI ethicist in Mumbai, who fights to ensure that algorithms reflect diverse perspectives. It's about Miguel, a mechanic in Mexico City, who reinvents himself as a renewable energy technician at 52. And it's about Aisha, a teenager in Nairobi, who learns to navigate a globalized world through the lens of a virtual reality headset.

At its heart, the 2035 Series is a story of choice. As machines become more intelligent, humans must decide how to wield this power responsibly. Will we use AI to heal divisions or deepen them? Will robots amplify human creativity or replace it? And will automation free us from toil or alienate us from purpose?

By exploring these questions through narrative and analysis, the 2035 Series invites readers to imagine a future that is not preordained but shaped by the decisions we make today. It is a journey into the possibilities of tomorrow, grounded in the realities of our shared humanity.

WHY THE AUTHOR HAS COME UP WITH THIS BOOK

Why This Book, Why Now

In 2035, the world stands at the crossroads of extraordinary technological evolution and the enduring need for human-centered progress. Arshad Hisham, an innovator, entrepreneur, and thought leader, has spent decades navigating these crossroads, shaping a future where artificial intelligence, automation, robotics, and education converge.

The ideas in this book are not simply projections of what could be; they are the result of hard-earned experience, ethical reflection, and an unyielding drive to align innovation with humanity's greatest challenges.

Arshad's story begins not in the gleaming tech campuses of Silicon Valley but in the vibrant yet complex landscapes of the Middle East and India. Growing up in environments that straddled traditional cultures and emerging modernity, he understood early on how technology could be both a bridge and a barrier. This duality has driven his career: from the assembly lines of Toyota to the research labs of IBM, from

government initiatives in Australia to founding InGen Dynamics, a company at the forefront of AI and robotics.

This book is an invitation to explore the transformative power of these technologies while grappling with their societal implications. Drawing inspiration from milestones like the launch of the Unimate robot in 1961, which heralded the automation of industry, and IBM Watson's victory on Jeopardy! in 2011, which showcased the potential of machine intelligence, Arshad dives deep into the breakthroughs, setbacks, and ethical dilemmas that have defined this century of innovation.

But this is more than a retrospective. It's a roadmap for navigating the world ahead. As someone who has negotiated multi-million-dollar exits, built startups from scratch, and advised some of the most forward-thinking organizations globally, Arshad writes not as a theorist but as a practitioner. His unique lens blends visionary foresight with a deep understanding of the ground realities faced by educators, policymakers, business leaders, and everyday citizens.

Arshad believes that artificial intelligence is more than a tool; it is a mirror reflecting humanity's values, biases, and aspirations. This belief underpins the ethos of the book: technology must not only advance; it must advance responsibly. Through narratives of breakthroughs—such as the 2024 debut of Tabletop Aido, a robot designed to address labor shortages—and anecdotes of collaboration, such as his work with underserved communities to democratize technology, Arshad paints a future that is both inspiring and cautionary.

A Vision Rooted in Humanity

Arshad's work reflects an unwavering commitment to the idea that technology should empower, not alienate. This principle extends to his work in education. When the

pandemic of the early 2020s forced a rapid shift to online learning, Arshad saw both the potential and the pitfalls of virtual education. He developed Futureonauts, a curriculum that reimagines how engineering students learn AI and robotics. Taught at top universities worldwide, the program emphasizes not just technical skills but the ethical considerations necessary for responsible innovation. What drives Arshad's vision is a simple but profound belief: that technology should serve the many, not the few.

This philosophy has informed his work with communities in rural India, where he championed projects to bring affordable automation to small-scale farmers. By integrating AI with traditional farming practices, these projects didn't just boost yields—they preserved livelihoods and cultural heritage.

Bridging the Gap Between Vision and Action

For all the optimism in this series, it is not blind to the challenges. The rise of AI and automation has been accompanied by significant disruptions.

One of the book's central themes is accessibility. Arshad critiques the stark inequalities in technological access, which became glaringly evident during the pandemic. While children in affluent cities learned through AR and VR classrooms, students in underserved regions struggled with basic internet connectivity. His advocacy for equitable education isn't theoretical—it's grounded in his projects to deploy learning hubs in parts of Sub-Saharan Africa and South Asia.

PROLOGUE: THE FUTURE OF LEARNING

The year was 2035, and the concept of education had undergone a transformation so profound it would have been unrecognizable just a few decades earlier. Instead of the static, chalk-dusted classrooms that had defined centuries of learning, students now immersed themselves in environments as dynamic and diverse as the world itself.

Take Aisha, for example, a teenager sitting beneath the sprawling shade of a baobab tree in rural Kenya. With the help of augmented reality glasses, her surroundings morphed into the vibrant streets of ancient Rome. Guided by an AI tutor that spoke to her in Swahili-infused English, Aisha wandered through a marketplace where holographic merchants called out in Latin. Every detail, from the marble steps of the Senate to the rustling of olive leaves, felt real.

Across the globe in Mexico City, Javier hunched over a disassembled drone in his family's living room, which doubled as his classroom. His virtual teacher, Sol, appeared as a life-sized hologram, patiently coaching him on how to repair the drone's faulty navigation system. Sol's ability to

adjust its teaching approach—offering encouragement when Javier grew frustrated, then challenging him when his confidence returned—had made it a critical partner in his education. For Javier, learning wasn't confined to textbooks or rote memorization. It was an adventure rooted in experimentation and creativity.

Yet, these advancements didn't come without complications. Aisha and Javier were part of a world grappling with a fundamental question: How do we ensure technology enhances education without eroding its humanity? This shift was more than just technological; it was philosophical.

By 2035, education wasn't about cramming facts for standardized tests but about fostering curiosity, adaptability, and a sense of interconnectedness. However, challenges remained—questions of access, equity, and ethics loomed large, ensuring that the story of education's transformation was still being written.

FOREWORD: WHY THIS BOOK, WHY NOW

Education is humanity's most profound and enduring project. It shapes not only what we know but also who we are and who we aspire to be. In 2035, as we stand at the crossroads of tradition and innovation, education has become both a promise and a paradox. On one hand, technology offers tools that are making learning more inclusive, engaging, and adaptive than ever before. On the other, these same tools challenge us to grapple with questions of equity, ethics, and what it means to truly learn.

The purpose of this book is to explore this transformation by weaving together narratives and analysis. Each chapter begins with a story—vivid snapshots of how individuals experience education in a rapidly evolving world. These stories, whether of a Kenyan teenager transported through AR or a 50-year-old mechanic retraining for a green energy job, serve as entry points for broader discussions about the challenges and opportunities shaping education.

Why now? Because education is not a static institution; it is a living, evolving ecosystem. The decisions we make today about technology, curricula, and equity will echo far into the future, influencing the next generation of thinkers, creators, and leaders. This book is both a reflection and a call to action—a reminder that the future of education is not inevitable but something we must actively shape together.

CHAPTER 1: INTRODUCTION: A GLOBAL CLASSROOM

Sofia's Virtual Class

Sofia adjusted the snug fit of her VR headset, taking a deep breath as her dimly lit apartment faded away. It wasn't much—a two-room home in the heart of Mexico City—but it had always been enough for her family. Now, though, this space transformed into something else entirely. With a soft hum, the world around her morphed into a dense, green rainforest, alive with the chatter of birds and the distant roar of a waterfall. Sofia's heart raced, the immersion always taking her by surprise no matter how often she used the system.

“Good morning, Sofia,” Ms. Ada said warmly, her holographic form appearing beside Sofia. Though clearly a projection, Ms. Ada's features were lifelike, her expression radiating kindness. “Today, we'll explore the Amazon rainforest. Together, we'll learn about biodiversity, ecosystems, and the delicate balance that sustains life here.”

Sofia wasn't alone. Her classmates, represented as avatars, were scattered throughout the virtual landscape. Some logged in from Kenya, others from Iceland, and a few, like her, from Mexico. As Ms. Ada guided the group deeper into the simulated rainforest, Sofia couldn't help but marvel at the experience. She could reach out and “touch” the bark of

trees, hear the buzz of insects near her ears, and feel a cool, simulated breeze as they moved.

Yet, something gnawed at her. She remembered her old school, the way her favorite teacher, Señora Delgado, would offer an encouraging smile or playfully tease her when she hesitated over an answer. Ms. Ada was perfect—too perfect. Her explanations were flawless, her demeanor unfailingly calm. But no matter how advanced the AI, there was a gap Sofia couldn't quite articulate.

“Ms. Ada, how do you feel about the deforestation statistics we're discussing?” Sofia asked suddenly.

Ms. Ada paused briefly, as if processing the question. “I recognize that deforestation poses a significant challenge to global ecosystems,” she said. “It's an issue that demands attention and collective action.”

Sofia nodded but felt a pang of frustration. The answer was accurate, yet clinical. What would Señora Delgado have said? She'd probably have shared a story about her childhood, of trees she'd climbed and birds she'd watched. Sofia sighed, torn between the wonders of her virtual classroom and the irreplaceable warmth of human connection.



The Transformation of Education

Sofia's story captures the heart of education in 2035—a world where technology has broken barriers, created possibilities, and redefined learning itself. But this transformation hasn't been without trade-offs. The global classroom is a marvel of innovation, offering access to knowledge once out of reach, yet raising questions about what education should truly prioritize.

Education in 2035: A New Paradigm

The idea of a classroom confined to four walls has become antiquated. By 2035, education has embraced technology's full potential, dissolving geographic, linguistic, and cultural barriers. Students from around the world now connect in virtual learning spaces that feel as real as physical ones.

From Local to Global

The concept of a school as a neighborhood institution has shifted. With the advent of virtual reality (VR) and augmented reality (AR), students like Sofia attend lessons in immersive environments. Whether walking through the ruins of Pompeii, exploring the Great Barrier Reef, or observing a simulated human cell divide, these lessons are no longer limited by textbooks or geography.

One landmark moment in this evolution occurred in 2023, when a coalition of tech companies and NGOs launched "One World Learning," a platform offering free VR-based education to underserved communities. This initiative proved transformative, connecting millions of students in rural areas to world-class educators and resources. By 2025, over 40% of global classrooms incorporated virtual or augmented reality tools.

Personalized Learning, Reimagined

AI plays a central role in tailoring education to individual needs. Algorithms analyze a student's performance, identifying strengths and weaknesses to adjust lesson plans in real time.

For example, if Sofia struggles with algebra, her virtual tutor slows down, presenting problems visually rather than numerically. Conversely, if she excels in biology, it

challenges her with advanced simulations, like dissecting a virtual frog to study anatomy.

This adaptability is powered by advancements in machine learning. Neural networks process billions of data points, ensuring every student receives a customized education. A child in rural India might learn arithmetic through interactive games, while a student in Tokyo delves into quantum mechanics, guided by AI-generated visualizations.

The Benefits of a Global Classroom

Expanding Access

Before the rise of virtual education, millions of children lacked access to quality schools due to geographic isolation, conflict, or poverty. Now, initiatives like solar-powered connectivity hubs bring education to the world's most remote corners. For students with disabilities, assistive robots translate sign language, generate braille, or provide physical support in virtual spaces.

Challenges on the Horizon

While technology solves many problems, it also introduces new ones.

The Digital Divide

Despite the proliferation of educational technology, disparities persist. In 2025, UNESCO reported that nearly a third of the world's population still lacked reliable internet access. For every Sofia attending a virtual rainforest lesson, there were children in underserved regions struggling with outdated textbooks. Bridging this divide requires sustained investment in infrastructure, affordable devices, and inclusive policies.

Balancing Technology and Humanity

The virtual classroom's biggest trade-off is the loss of human connection. While AI teachers excel in knowledge delivery, they lack the warmth, intuition, and creativity of human educators. Students like Sofia benefit from tailored instruction but miss the personal relationships that build trust and motivation.

Moreover, the rise of automation raises questions about resilience. What happens when systems fail? Can students adapt if they've grown reliant on AI-driven guidance?

Looking Ahead

Sofia's classroom represents the pinnacle of technological innovation, but it also serves as a reminder of education's core purpose: to inspire curiosity, foster connection, and empower individuals. As we move further into the age of virtual learning, the challenge lies in preserving the human element.

The next chapter will delve into the pivotal year 2025, a time when the seeds of today's global classroom were planted amidst breakthroughs, resistance, and the promise of a brighter future.



TRANSFORMATION OF EDUCATION BY 2035



INDUSTRIAL TECHNOLOGY
PERSONALIZED LEARNING
PERSONALIZED LEARNING



ACTIVE
LEARNING!



GLOBAL TECHNOLOGIES
PERSONALIZED LEARNING



AI ASSISTIVE
HUMAN CONNECTION



SELECTS
EDUCATION



WELL
BEING



SOLAR-POWERED
EDUCATION CONNECTION
IN RURAL AREAS!



CHAPTER 2: THE EDUCATION SYSTEM IN 2025

CHAPTER 3: AI IN EDUCATION

CHAPTER 4: AUTOMATION AND ROBOTICS IN LEARNING

CHAPTER 5: IMMERSIVE LEARNING: AR, VR, AND BEYOND

**CHAPTER 6: FROM MEMORIZATION TO MASTERY:
REDEFINING CURRICULUM**

CHAPTER 7: EQUITY AND ACCESSIBILITY IN EDUCATION

CHAPTER 8: THE FUTURE OF WORK AND LIFELONG LEARNING

CHAPTER 9: ETHICS IN EDUCATION TECHNOLOGY

CHAPTER 10: THE VISION FOR 2035

EPILOGUE

DISCLAIMER

This book combines forward-looking projections and fictional narratives to explore the potential trajectory of technology and its impact on society. While the scenarios and technologies described are grounded in current research and trends, they are speculative and should not be interpreted as predictions or guarantees of future developments.

Readers should be mindful that the narratives, characters, and events in this book are fictional and intended to illustrate broader themes and concepts. Any resemblance to actual persons, living or dead, or real events is purely coincidental.

The ideas and opinions expressed herein are those of the author and do not necessarily represent the views of any organizations or entities referenced in this work. This book is intended for educational and entertainment purposes and should be approached as a starting point for thoughtful discussion rather than a definitive guide.

May this journey inspire curiosity, dialogue, and a commitment to shaping a future that reflects humanity's highest aspirations.



ABOUT ARSHAD HISHAM

Arshad Hisham is an Advisor, Educator, Managing Consultant, Investor, Engineer, and Inventor with degrees in Business, Engineering, and an MBA. He is a dynamic and driven innovator with a proven track record of exceptional achievements. Over the course of his career, Arshad has transformed simple ideas into multimillion-dollar enterprises, earned worldwide press coverage, and successfully negotiated complex exit sales to billion-dollar global conglomerates.

Arshad has served on advisory councils at leading institutions like Cal State East Bay and as a jury member for the prestigious Edison Awards in the United States. His groundbreaking work in AI, Automation, and Robotics has been featured in major publications, including Fortune, Forbes, Discovery Channel, IEEE, and Popular Science. A sought-after speaker, Arshad has delivered keynote

addresses at global events such as the IEEE Robotics Symposium at Columbia University, the Boston Consulting Group's AI Summit in Chicago, The Walt Disney Company, The City of Tomorrow Summit at 92Y in New York, and the Robo-Business Summit in San Jose.

As a top operations executive and digital transformation leader, Arshad has worked with Silicon Valley high-tech firms and Fortune 50 companies, driving growth and efficiency across industries such as healthcare, retail, hospitality, banking, and large consumer businesses. In addition to his corporate roles, Arshad is a dedicated board member, angel investor, and advisor to emerging technology companies in AI, Automation, Cybersecurity, Blockchain/FinTech, and Robotics. His global impact spans Silicon Valley, India, the UK, and the Middle East, where he has fostered innovation and empowered entrepreneurs.

Arshad's professional journey includes significant contributions during his tenure with IBM, the Government of Australia, and Toyota, where he played key roles in advancing automation and enterprise software development. Between 2008 and 2015, he founded four rapidly growing startups in Enterprise Software, Vehicle Automation, Point-of-Sale Systems, and Online Gaming. Since 2015, as the founder and CEO of InGen Dynamics, he has spearheaded groundbreaking advancements in AI, Education, Automation, and Robotics. The company's innovative products, including Aido, Sentinel, Kaiser.Haus, and Origami, address global challenges such as labor shortages and environmental sustainability. By 2025, the company achieved an \$80M revenue pipeline and successfully deployed Tabletop Aido robots across the United States, London, and the Asia Pacific, with over 750,000 hours of field operations.

Arshad's contributions extend into education, where he developed a comprehensive Engineering Degree curriculum in AI, Automation, and Robotics for the Futureonauts

educational initiative, now taught in top engineering colleges worldwide. His innovations have been referenced by prestigious academic institutions, including MIT, the University of Pennsylvania, and IEEE, and featured in high school textbooks. His profile and company have been highlighted by the American Society of Mechanical Engineers (ASME) and exhibited at world-renowned science museums like the Sheikh Abdullah Al Salem Culture Centre in Kuwait City.

Arshad also serves as an Executive-in-Residence at Cranfield School of Management. A recipient of the Edison Award Silver Medal, he regularly shares his expertise on global podcasts and media outlets, discussing AI, IP, Education, Automation, and Robotics. Arshad Hisham's work reflects a deep commitment to democratizing technology, fostering equity, and designing systems that empower communities worldwide. His journey is not just a story of technological success but one of human ingenuity, ethical responsibility, and an unyielding passion for building a brighter future through innovation.