* **Context**: #personal\_story #India #childhood #upbringing
* **Speaker**: Professor Sanjay Sarma
* **Answer**:  
   "I consider myself very lucky and privileged to have grown up in India. I come from an upper-caste family with highly educated parents. My father was a senior civil servant and a physicist, and my mother, a teacher, had a deep love for history. Conversations in my family often revolved around history, math, physics, politics, and Gandhi. My grandparents and other relatives were also incredibly well-read. Growing up in such a stimulating environment, I was constantly surrounded by knowledge and curiosity. It was truly a blessing."
* **Context**: #education #India #IIT #personal\_story
* **Speaker**: Professor Sanjay Sarma
* **Answer**:  
   "When I was 14, my grandfather was in the military. He actually served in Malaysia, during World War II. When I was around 13 or 14, my mother and aunt sat my cousin and me down for a serious conversation. They said, 'We’re educated, but we’re not rich. If you get into IIT, life will be easier for you.' That advice stayed with me, and I began studying hard for the IIT entrance exams. Eventually, I got in, which was a defining moment in my life. IIT wasn’t just a place where I gained knowledge—it’s where I met my wife. My father, who earned a PhD from IIT, and several of my cousins also attended, so you could say it’s part of our family legacy. While I went on to IIT, my cousin chose the military and excelled there. I’ve always been a hardcore IIT guy—it shaped a big part of who I am today."
* **Context**: #education #career #US #personal\_story
* **Speaker**: Professor Sanjay Sarma
* **Answer**:  
   "I didn’t initially plan to go to the United States. After finishing my studies, I decided to take what my parents might have considered the most 'unsafe' job—working in the oil industry with a company called Schlumberger. I was based in Aberdeen, on the north coast of Scotland. During my time there, I developed a wobbly knee, which started to worsen. That led me to take a leave of absence, and during that time, I went to Carnegie Mellon University (CMU) in the US. That’s how I ended up there—it wasn’t part of the original plan but a result of life’s unexpected turns."
* **Context**: #India #personal\_growth #societal\_change
* **Speaker**: Professor Sanjay Sarma
* **Answer**:  
   "In the 1980s, India was still finding its place in the world. For a long time, there was a sense of confusion about our role—whether we were second-class or part of the global stage. India was more aligned with the Soviet Union during the Cold War, which added to this uncertainty. Then, in 1983, everything began to shift when India won the Cricket World Cup. It was a stunning, come-from-behind victory, and I cannot overstate the impact it had. To this day, when I think about that moment, the hair on the back of my neck stands up. For the first time, Indians began to wonder if they could take on the world.

That spirit of possibility carried over to my generation. When I graduated from IIT and went to CMU, I realized I could hold my own. My classmates were thriving too, and some even started selling companies and achieving remarkable things. It was a time of emergence and self-belief. We saw examples of Indians excelling globally—scientists like Arun Majumdar and others who inspired us.

Culturally, India’s diversity plays a huge role in fostering curiosity and debate. We’re a society of storytellers, arguers, and thinkers. Our ethos, shaped by a multitude of religions and philosophies, encourages the dissection of ideas. Within each religion—be it Hinduism, Islam, or Jainism—there are sects that argue and question one another. This openness to debate extends across our culture.

Another factor is our focus on fundamentals, particularly in math and logic. The entrance exams in India are brutally challenging, which instills a deep respect for precision and clarity. In my school days, the highest compliment you could give someone was to call them a 'fondue'—a person with their fundamentals straight, especially in math and physics. That ethos, combined with our diversity and ability to argue, has made us naturally curious and healthily argumentative.

While China has done brilliantly in innovation and science, I believe India’s storytelling and narrative-building stand out. English has been a huge advantage for us, especially for those of us from educated backgrounds where English is almost like a first language. But beyond language, our culture of debate and exploration has been crucial in shaping us into a nation of thinkers and innovators."

* **Context**: #India #resilience #multipolarity #culture
* **Speaker**: Professor Sanjay Sarma
* **Answer**:  
   "India’s resilience and ability to embrace multipolarity are deeply rooted in its cultural syncretism. Our diversity and the interplay of various cultural currents are fundamental to the way India operates. For instance, when I was growing up, my father shared a story about our family compound—'kampong,' as the word originates. In that compound, there was a Sufi dargah where Muslims would come to pray. Afterward, they would sit and have tea with my grandfather. That seamless coexistence was woven into the very fabric of our lives.

Even within any one religion, India has a remarkable variety of perspectives. Whether it’s Hinduism, Islam, or other faiths, there are countless sects, each contributing unique viewpoints. Parsing through these differences and embracing diversity has shaped India’s character. This cultural ethos of inclusivity and debate is a powerful foundation for India’s resilience in navigating a multipolar world."

* **Context**: #curiosity #human\_nature #education #AI
* **Speaker**: Professor Sanjay Sarma
* **Answer**:  
   "I am deeply concerned that, globally, we’ve been stamping out curiosity. Let me draw a parallel. The first Industrial Revolution ended with the concept of interchangeable parts—often attributed to Eli Whitney but really driven by the military complex. This standardization was essential for quickly replacing parts like wheels and shells in war. Similarly, the last century turned people into interchangeable parts. Factories could be replicated across countries, producing identical results. But this required people to follow instructions, not ask questions. Curiosity became inconvenient—a bother.

What makes humans special is curiosity. It activates our dopaminergic circuits, sparking dopamine flow. Babies, for instance, are endlessly curious, playing to connect their minds and bodies, exploring boundaries. Yet society smothers this innate trait. Phrases like ‘Curiosity killed the cat’ reflect this mindset.

For me, curiosity is the greatest gift I received as a child. It allowed me to be playful, ask silly questions, explore odd ideas in conversations, and immerse myself in books. That freedom to explore shaped who I am. Especially in the age of AI, we must protect curiosity. If we train people to think and act like robots, then what’s left for real robots to do? Curiosity is not just a trait—it’s the essence of being human, and keeping it alive is essential for our future."

* **Context**: #innatecuriosity #childhood #humanpotential #shapingcuriosity
* **Speaker**: Professor Sanjay Sarma
* **Answer**:  
   "I'm an idealist at heart, and I firmly believe that every child is born curious. It’s a fundamental human trait—something as natural as a kitten's curiosity, which we find so endearing. Curiosity is woven into the essence of being human.

However, society and culture inevitably shape this innate curiosity. They mold it, sometimes into rigid patterns, other times into wonderfully diverse expressions. In my view, while society tries to channel curiosity into specific forms—be it structured or free-flowing—the core of curiosity remains essential and undeniable. It’s what drives discovery, creativity, and the human spirit."

* **Context**: #culture #creativity #curiosity #optimism
* **Speaker**: Professor Sanjay Sarma
* **Answer**:  
   "Culture, at its core, defines how people behave—what to do, what not to do, how to act, and how not to act. It often sets boundaries. For instance, in American culture, there are moments when people question norms like respecting elders or self-expression through spiky hair, tattoos, or even dropping an F-bomb. But culture can also inspire creativity by asking, 'Why not?'—Why not try something new? Why not explore a different possibility? That’s where the magic of curiosity comes in.

Curiosity is the elixir that unleashes creativity. It’s less about trying to artificially evoke it and more about ensuring we don’t smother it. If we stop dousing curiosity and instead allow it to flourish naturally—letting the dopamine flow—communities and nations can embrace a more optimistic, glass-half-full perspective. The key lies in fostering an environment where possibilities are encouraged rather than constrained."

* **Context**: #curiosity #deprivation #learning #motivation
* **Speaker**: Professor Sanjay Sarma
* **Answer**:  
   "Hunger drives curiosity—hungry animals will look for solutions, and the same applies to people. One unfortunate reality is that countries that experienced colonization and its aftermath often developed a profound hunger for knowledge and progress. Growing up in such circumstances fosters a drive to understand and master fundamentals, to chase those 'aha' moments of discovery.

I vividly recall a day, 45 years ago, when a classmate and I were grappling with the concept of pH—a measure of acidity. We didn’t get it at first, but we kept at it until, finally, it clicked. I still remember the excitement we felt when we exclaimed, 'Got it!' That drive to understand wasn’t just about curiosity; it was also essential for getting into IIT, where such moments of clarity were celebrated.

Deprivation can indeed spark curiosity, but I hope it doesn’t have to. Many of my peers in graduate school came from affluent backgrounds, and they were equally curious and driven. I believe we can create curiosity through joyful exploration and engagement rather than relying on deprivation to fuel it."

* **Context**: #leadership #global\_success #SoutheastAsia #India
* **Speaker**: Professor Sanjay Sarma
* **Answer**:  
   "For someone from Malaysia, the Philippines, Vietnam, Cambodia, Myanmar, Brunei, or Indonesia to rise to lead global giants like Google, Microsoft, or PepsiCo, certain foundational traits and systemic advantages would need to align. Indians, for example, have benefited from their command of English, which has opened many doors on the global stage. Beyond that, there’s a cultural trait I call 'soft assertiveness'—Indians are assertive, but they express it with subtlety, which resonates well in international settings.

There are examples of Southeast Asians achieving similar success, like the CEO of Broadcom or the chairman of Del Monte. However, what India had, especially starting in the 1980s, was a cultural awakening. I often point to the 1983 Cricket World Cup victory as a pivotal moment. It instilled a belief that 'If they can do it, so can I.' That sense of possibility, combined with intense societal pressures to excel and a strong emphasis on getting the fundamentals right—what we called being a 'fondue' in my school days—played a significant role.

My wife, for example, also attended IIT, and her rank was better than mine! That competitive yet supportive environment fostered excellence. It’s a mix of push and pull factors that aligned well in India during that era. I believe such an environment can be nurtured in other countries too. Success on the global stage is not exclusive to India—it’s a matter of creating the right cultural, educational, and motivational conditions."

* **Context**: #SoutheastAsia #global\_success #education #narrative\_building
* **Speaker**: Professor Sanjay Sarma
* **Answer**:  
   "Kickstarting the process in Southeast Asia requires a focus on narrative building and effective communication, more than just mastery of English. While AI tools like ChatGPT can now translate languages instantly, English remains dominant in the global corpus of knowledge and AI. That makes it a critical skill, but it’s not the only one.

I once had a student ask me if my good English was the reason for my success. My response was simple: It’s not just about language proficiency; it’s about constructing a compelling narrative. I’ve seen students who don’t speak perfect English create such powerful stories and presentations that the language itself becomes secondary. In fact, their authenticity often makes their narratives even more impactful.

Southeast Asia has a rich tradition of performance and storytelling, particularly in countries like Indonesia, which boasts incredible performance arts. Tapping into that heritage and reviving it for the modern world could be transformative. Writing and presenting are not just about communication—they clarify thought. As I often say, writing is the highest form of thinking. At institutions like MIT, Stanford, and Berkeley, we have PhD students present regularly because the act of explaining forces them to organize their thoughts, like preparing an open house in their minds.

For Southeast Asia to excel on the global stage, it needs to cultivate these skills. Teach the art of storytelling, focus on clear and empathetic communication, and build a culture where expression is valued. That’s how individuals and communities can truly showcase their potential."

* **Context**: #neuroscience #learning #prefrontal\_cortex #mindfulness
* **Speaker**: Professor Sanjay Sarma
* **Answer**:  
   "The prefrontal cortex is often referred to as the CEO of the brain, and for good reason. It allows us to plan, regulate our actions, anticipate scenarios, and engage in executive functions that set humans apart from other animals. Great apes, for example, have much less developed prefrontal cortices than we do. They can plan ahead to some extent, but nowhere near the level of complexity we can achieve—and far more than a cat can.

The prefrontal cortex isn’t a fixed resource; it’s something we can develop. When I was preparing for IIT, I was, in essence, training this part of my brain. Activities like mindfulness or meditation are another way to strengthen it. When we meditate, we’re essentially telling the brain, 'This is the boss,' instead of letting our thoughts wander aimlessly. It’s an incredibly powerful tool in managing our executive functions and in shaping how we approach challenges and decisions. We instinctively recognize its importance—after all, when we point to ourselves, we point to our heads, acknowledging the role this part of the brain plays in who we are."

* **Context**: #mindfulness #meditation #neuroscience #brain\_discipline
* **Speaker**: Professor Sanjay Sarma
* **Answer**:  
   "I believe meditation helps the brain by instilling discipline. Let me explain it using an analogy: Think of your brain like a laptop. It has an operating system—Windows, MacOS, or Android—that runs everything underneath. On top of that, you have programs like Word, PowerPoint, or your browser. If one of these programs starts consuming too much memory or crashes, the operating system has to step in and shut it down to preserve the overall functionality.

Mindfulness works in a similar way. It trains your mind to prioritize the operating system—the parent, the adult—over the individual processes. When you meditate, you’re essentially telling your brain, 'This is the boss.' It allows you to observe your thoughts without getting caught up in them, maintaining perspective and preventing distractions from taking over. By reinforcing the brain’s executive function, mindfulness ensures the core processes run smoothly, keeping you focused and balanced."

* **Context**: #education #learning\_reform #action\_learning #pedagogy
* **Speaker**: Professor Sanjay Sarma
* **Answer**:  
   "The history of learning is deeply rooted in tradition, but if you ask educators why they teach the way they do, the answer is often, 'Because that's how it has always been done.' This approach isn’t based on how learning truly works. In fact, the instincts of parents and children are often closer to effective learning than the institutions we’ve created.

The traditional model assumes that the teacher holds the pen, and the student’s brain is a blank sheet of paper. The teacher writes on it, declares victory, and then tests the student. But that’s not how learning occurs. Learning is more like a plant growing. The learner—whether a child or an adult—builds a model of the world, and you have to provide what they need, when they need it. You don’t dump a lifetime supply of sunlight and nutrients on a plant on day one and expect it to thrive. You feed it what it needs as it grows.

To truly re-engineer learning, we need to give agency back to the learner. We’ve taken it away. That’s a key principle I discuss in *Grasp*. Additionally, learning happens when you act on what you’ve learned—when you build something or apply it. This is a founding principle at MIT and the Asia School of Business, where we emphasize action learning, or *mens et manus* (mind and hand). Learning isn’t complete until you exercise it in the real world. Without this, you’re just familiarizing yourself with material to regurgitate it in an exam, which is fundamentally flawed."

* **Context**: #education #on\_campus\_vs\_off\_campus #real\_world\_learning #pedagogy
* **Speaker**: Professor Sanjay Sarma
* **Answer**:  
   "First of all, I believe we need to get students out of the traditional classroom. A classroom, as it is today, feels like a cage where students sit passively while the teacher dumps information and leaves. This model doesn’t maximize learning potential. But does that mean we should entirely move off-campus? Not necessarily. Instead, we need to redesign campuses.

MIT was a pioneer in integrating labs into learning, where students worked hands-on. A campus can simulate reality to an extent, but to truly learn, students must step into the real world. Think of the ancient philosophers—walking and talking while tackling real-world problems. That’s practical learning.

We need to reimagine in-person time on campus. Lectures can now be delivered online through platforms like Khan Academy—why waste valuable face-to-face time on something that can be done more effectively elsewhere? In-person sessions should be about active, studio-like learning experiences where students collaborate, create, and engage deeply with the material. Then they should take that learning into the real world to apply it.

We’ve also overemphasized degrees as a proxy for status, not necessarily as proof of effective learning. It’s time to rebalance the system and focus on meaningful, actionable education. Real learning happens when students interact with and impact the world around them, not just when they sit in a classroom."

* **Context**: #education #precision\_learning #metaphor #contextual\_learning
* **Speaker**: Professor Sanjay Sarma
* **Answer**:  
   "In *Grasp*, I used the metaphor of precision agriculture to describe how education should be approached, and I think it’s a powerful analogy. The idea is that just as precision agriculture gives a plant exactly what it needs, when it needs it, education should provide learners with the right knowledge, at the right time, in the right context.

When I was at IIT, I took courses on fluid mechanics, but I didn’t fully understand their purpose at the time. However, within a week of working on an oil rig, everything clicked. Suddenly, terms like shock (related to supersonic velocities), turbulence, and laminar flows made perfect sense. Context brought the learning to life.

Education is similar to organizing a library. If you toss a bunch of books into a pile, it’s overwhelming and unhelpful. But if you organize the books into categories—fluid mechanics, philosophy, or anything else—and understand how they connect, it’s transformative. Context creates the 'slots' in your mind where knowledge can settle and be retrieved when needed.

Another essential aspect is explaining what you’ve learned. Teaching, narrating, or putting knowledge into practice is like hosting an open house for your brain. When your mental library is well-organized, you can confidently share it with others. Precision in delivering education and fostering understanding through context is key to making learning effective and durable."

* **Context**: #education #case\_studies #action\_learning #pedagogy
* **Speaker**: Professor Sanjay Sarma
* **Answer**:  
   "I’m a strong believer in case studies because they provide valuable context. They force you to take what you’ve learned, apply it, and examine it from multiple angles—almost like viewing it in 3D. However, as an engineer, I would argue that action learning provides an entirely different and deeper perspective. Case studies, while incredibly useful, are still curated simulations.

To illustrate, imagine training to be a soldier. Simulations can teach you a lot, but the first time you encounter real bullets in the field, you realize, 'Oh my God, this is a completely different world.' The real-world experience brings a level of understanding that no simulation can match.

Action learning involves sending students out into real-world projects. For instance, working on an agriculture project to improve crop yields over three months would provide insights and learning experiences that are hard to replicate in a classroom or case study. It’s the difference between studying in theory and learning by doing—both are valuable, but action learning offers a perspective that’s irreplaceable."

* **Context**: #polarization #inequality #internet #education #social\_media
* **Speaker**: Professor Sanjay Sarma
* **Answer**:  
   "From an educational standpoint, addressing polarization and inequality starts with understanding the dual nature of the internet. On one hand, it’s a powerful tool for sharing knowledge and democratizing information. On the other, it’s a business model designed to attract eyeballs and foster addiction. These two purposes are fundamentally at odds.

Polarization is fueled by confirmation bias—when people are exposed to ideas they already agree with, they’re more likely to engage further, reinforcing their existing beliefs. This is another form of addiction, driven by algorithms designed to keep users hooked. Unfortunately, the business model of the internet has overshadowed its democratic potential.

Social media is particularly problematic. The surgeon general of the United Nations recently suggested adding warning labels to social media platforms—a step I believe is overdue. We’ve crossed several thresholds where the harms of unchecked online engagement are undeniable. Take TikTok, for example; its potential ban in the U.S. may stem from geopolitical concerns, but from the perspective of safeguarding mental health—both young and old—it might not be a bad idea.

To remedy these issues, we need to reset the internet’s purpose. While I’m cautious about over-regulation, I believe social media requires tighter oversight. As Jonathan Haidt aptly put it, we’re living in a strange time where these platforms are driving division. Regulation isn’t just necessary—it’s urgent."

* **Context**: #nation\_states #regulation #technology #AI
* **Speaker**: Professor Sanjay Sarma
* **Answer**:  
   "Nation-states do have the potential to address these challenges, but their approaches are often not driven by a genuine interest in improving human outcomes. Take China, for example—they’ve implemented limits on how much TikTok young people can watch. While that might seem like a step toward safeguarding mental health, the underlying motives are likely tied to other political or societal interests rather than purely altruistic concerns.

Meanwhile, lobbying complicates the picture globally, especially in democratic systems where corporations exert significant influence. The internet remains an extraordinary innovation, but its potential is being overshadowed by misaligned incentives.

Adding to this complexity, AI is now entering the scene—stage left, if you will—and will likely amplify these dynamics. Unfortunately, I don’t see our current political systems being equipped to guide these transformative technologies in the right direction. The misalignment between politics and the stewardship of technology is a significant hurdle we need to address."

* **Context**: #governance #redistribution #public\_goods #idealism
* **Speaker**: Professor Sanjay Sarma
* **Answer**:  
   "I completely agree that the current trajectory is alarming. When people flock to big cities—like fireflies drawn to light—they often face unaffordability, declining fertility rates, and an inability to sustain families. While this might drive good numbers for corporations in the short term, it’s not a viable long-term recipe for societal success.

What we need is to awaken the 'dopamine' in smaller towns and cities—what I call centrifugal dopamine. This involves inspiring idealism and encouraging people to invest in their local communities. It could mean starting a business, helping their local schools, or simply fostering a sense of contribution and purpose. History shows us this is possible.

Growing up in India, I saw how Gandhi’s idealism inspired people. My own family lived far from major metropolises like Madras or Calcutta, yet my grandfather and great-grandfather joined the freedom movement. My great-grandfather, a barrister, went so far as to burn his British clothes and law degree, plunging the family into poverty for the cause. That kind of idealism—distributed across communities—can ignite change.

A great leader can make all the difference by cultivating this curiosity and inspiration. It’s about encouraging people to believe in the power of their contributions, no matter how small, to drive collective progress and restore balance in society."

* **Context**: #history #nation\_building #polarization #historical\_amnesia
* **Speaker**: Professor Sanjay Sarma
* **Answer**:  
   "I completely agree that historical amnesia can undermine nation-building. Today, we’re often caught in the 'now,' surrounded by like-minded groups and echo chambers. This fosters polarization and encourages a focus on instantaneous gratification—a quick dopamine rush that’s very different from the deeper curiosity-driven engagement I often emphasize.

We’ve legitimized this focus on the short term with the idea that democratized content production—becoming a YouTube or TikTok influencer—is inherently valuable. But influence for what? What macroeconomic or societal uplift does this actually provide? It’s a profoundly limiting and self-limiting mindset.

As George Santayana famously said, 'Those who forget history are destined to repeat it.' My own take is, 'Those who forget Santayana and Santanya are destined to learn of him.' We must resist the temptation to discard the lessons of history in favor of fleeting trends. Understanding the past is essential for building a strong and resilient future."

* **Context**: #education #MBA #value\_proposition #degree\_reform
* **Speaker**: Professor Sanjay Sarma
* **Answer**:  
   "The founding principle of education is to make you better, but the real question is: does it? Are you better off spending four years in undergrad or two years in an MBA program, or would you gain more by working during that time? The answer isn’t just about monetary returns—it’s about whether the experience truly makes you better at your job and in your thinking.

I’m an idealist, and I believe in the power of abstractions. Abstractions allow you to elevate your thinking, use analogies across fields, and gain a broader perspective. A good education can enable this, and I’ve seen its benefits firsthand. But the problem arises when we over-rotate—when we add unnecessary elements to degrees without focusing on their core purpose.

The MBA at ASB, for example, is highly immersive, with small cohorts, action learning, and even exposure to MIT. It works well because of its deliberate design and high-quality students. However, does the MBA as a general concept work universally? I’m skeptical. My wife graduated from HBS, and I’m the CEO of an MBA school, but I’m also an engineer who never pursued an MBA myself.

What we need to consider is the efficacy, durability, and impact of these degrees. Would I advise my 22-year-old to pursue an MBA from any program? No. It depends on the context. If learning accounting or another skill would help her at a specific stage in her career, then yes, it might make sense.

We also need to rethink the 'bulk purchase' model of degrees. Instead of locking students into expensive, all-encompassing programs, we should unbundle education. Let students 'try before they buy,' making learning more cost-effective and flexible. With $1.8 trillion in U.S. tuition debt—most of it immune to bankruptcy—it’s clear that academia has some tough questions to answer. How did it end up in this position? It’s time for significant reform, not just for MBAs, but for all degrees."

* **Context**: #education #high\_costs #tuition #reform
* **Speaker**: Professor Sanjay Sarma
* **Answer**:  
   "Skepticism about high education costs is completely justified. The rising costs in the U.S. education system are the result of a self-reinforcing spiral. Larry Bacow, the former president of Harvard, once explained this to me during a conversation we had before he took on that role. He outlined how the system works: Professors are tenured based on their research, which requires teaching assistants and labs. To fund these, universities raise money and build new facilities. However, these buildings come with maintenance costs, often financed through debt. Then, to sustain these costs, universities raise more money and build even more facilities, perpetuating the cycle.

This spiral, coupled with a heavy reliance on fundraising, has caused tuition costs to skyrocket. Yet, for all this spending, the fundamental question remains: Does the education provided justify these costs? The answer, often, is no.

The system needs to shift its focus back to the value it provides. Education should be fairly priced and designed to deliver clear benefits to students. Breaking the addiction to fundraising and halting this unsustainable cost spiral will require significant discipline—and it won’t happen overnight."

* **Context**: #AI #education #global\_equity #learning\_reform
* **Speaker**: Professor Sanjay Sarma
* **Answer**:  
   "I absolutely believe AI has the potential to equalize education globally, but it requires a fundamental rethink of how we approach learning. The way we educate now is deeply flawed. Private schools might do slightly better, but the system as a whole focuses too much on cramming content, turning education into a 'hot dog eating contest' where the number of hot dogs consumed (or the amount of content absorbed) matters more than what is actually retained or understood.

If we instead focus on true learning—durable, curiosity-driven, and focused on fundamentals—we could reduce unnecessary content and make education more relevant and efficient. Right now, we’re battling deficiencies, not improving efficiency. That’s where AI can step in.

Think of AI as the tennis wall I practiced with as a kid. The wall returned every ball, helping me improve consistently. My friends, also mediocre players, didn’t provide the same feedback. AI can be that wall for students, a sparring partner that challenges them, makes mistakes, and keeps them on their toes. It can’t replace the human coach but can democratize access to foundational learning tools.

Sal Khan’s use of AI tools like ChatGPT shows how this can work in practice, but challenges remain. The current costs of AI are too high—servers are expensive, chips are in short supply, and companies like Nvidia dominate the market. To truly democratize education through AI, we need open-source models and more affordable technology.

Done right, AI could unleash creativity and level the playing field in education. It could represent a reset moment, bringing us all back to the starting gates. But for this to succeed, we need to align our populations and systems with this vision."

* **Context**: #AI #open\_source #technology\_democratization #geopolitics
* **Speaker**: Professor Sanjay Sarma
* **Answer**:  
   "I firmly believe AI should be open-sourced. The current landscape of AI is heavily server-based, with significant access challenges. Nvidia dominates the chip market, creating a massive lead, which has turned AI into a geopolitical football between nations like the U.S. and China. The costs are prohibitive—servers, power, and consumer access remain expensive—and much of the ecosystem is closed.

With open-source AI, we could shift towards smaller, more efficient language models capable of running on personal devices like phones. This would reduce reliance on expensive infrastructure and foster faster local competition. I recently read about Taiwan Semiconductor Manufacturing Corporation exploring new packaging approaches, which highlights the kind of breakthroughs we could see in this space.

AI’s current state is very centripetal, with a few companies holding disproportionate power. This centralization risks exacerbating existing economic inequalities. Open-sourcing AI could help commoditize it, making it more accessible and reducing the concentration of power.

Countries like China and India, along with many others, are not sitting idle—they recognize the stakes and are actively engaging in the space. I’m hopeful that open-source AI will take root and counteract these trends, democratizing access to the technology and unleashing its potential for innovation and equity."

* **Context**: #AI #China #geopolitics #open\_source
* **Speaker**: Professor Sanjay Sarma
* **Answer**:  
   "China’s dominance in AI is an important topic, and while there are legitimate concerns, I believe there is hope in the potential for open-source AI to level the playing field. Platforms like Hugging Face and GitHub are already fostering open innovation, and I anticipate that this trend will continue, leading to AI models that are more verticalized—trained specifically for applications like Bahasa, Indonesian legal canon, or other specialized domains.

This kind of diversification could help commoditize AI, reducing the risk of power being concentrated in the hands of a few players. Breakthroughs in this space, such as more efficient training methods and localized models, might counterbalance the accumulation of dominance by any one country or entity.

However, this is wishful thinking to some extent, and the current trajectory does warrant concern. The concentration of power in AI, whether by companies or nations, poses significant risks, and we should remain vigilant about where it’s headed. Open-source efforts could be a saving grace, enabling broader participation and innovation across the globe."

* **Context**: #AI #geopolitics #US #China #innovation
* **Speaker**: Professor Sanjay Sarma
* **Answer**:  
   "Yes, China and the U.S. are positioned as the biggest beneficiaries of AI because of their dominant roles in its creation, but we need to unpack what that really means. For example, even a company as wealthy as Apple, sitting on $60 billion in cash, has decided to use OpenAI’s technology instead of trying to catch up. This shows just how fast-moving the AI field is—even established giants like Apple and Google, who invented the transformer in 2017 (Ashish Vaswani et al.), are struggling to stay ahead. Gemini, for instance, has barely entered the equation.

The question is, how do AI companies actually make money? OpenAI relies on subscription models, but with open-source efforts like Meta’s, there’s pressure on paid services. For instance, at the Asia School of Business, we’re experimenting with creating open-source mini server farms for AI. As the current generation of AI technology reaches saturation, it will be harder for subscription models to sustain themselves.

When it comes to creation, the real action lies in building applications on top of AI. While the U.S., China, and even countries like India and Estonia have an edge due to their innovative ecosystems, I don’t believe other countries should count themselves out. The democratization of AI through open-source models presents an enormous opportunity for smaller nations and underdog innovators to compete and create value. Ultimately, the field is wide open for those who can leverage AI creatively, regardless of their geopolitical position."

* **Context**: #AI #SoutheastAsia #small\_business #opportunity
* **Speaker**: Professor Sanjay Sarma
* **Answer**:  
   "AI as the fridge, and Southeast Asia as the Coke makers is a very apt metaphor, and I do have a positive view on it. Let me explain. Large companies—the behemoths—tend to be cautious about using AI because, unlike deterministic computer programming, AI is probabilistic. It’s error-prone, it hallucinates, and it makes mistakes. For example, if a big airline uses an AI-powered customer service bot and it makes a mistake, they become a large target for lawsuits. This happened with Air Canada when a chatbot made an error and the company tried to blame the bot. A passenger sued and won in small claims court.

On the other hand, small businesses, especially in Southeast Asia, have a unique opportunity. Consider a travel agency in Indonesia managing Hajj pilgrimages. Using AI, they could customize services in Bahasa, streamline visa processes, and even offer packages for extended travel in Saudi Arabia. These smaller businesses can adopt AI without the same level of scrutiny or risk as large corporations.

In the short term, I believe small businesses—especially the long tail of enterprises in places like Southeast Asia—can harness AI more effectively than large companies. The key is to move quickly, innovate locally, and take advantage of the agility and accountability that smaller enterprises have. It’s an exciting time for the region to leverage AI creatively."

* **Context**: #AI #hallucination #societal\_impact #ethics
* **Speaker**: Professor Sanjay Sarma
* **Answer**:  
   "Is AI just a hallucination? It’s an intriguing question, and it ties into the evolution of human consciousness. There’s even a theory called the 'stoned ape theory,' which posits that early humans consuming hallucinogens developed the ability to scenario plan. While I’m not convinced it’s the right theory, it’s an interesting philosophical scaffold to think about.

AI, in essence, is predictive—it plays out one word after another, crafting responses. It’s a bit like predictive typing on steroids. What’s remarkable is that it can appear to reason because of its training on human language and vast amounts of knowledge. You ask it questions, and it produces mostly sensible answers. But let’s be clear: AI doesn’t have a soul. It doesn’t ponder the ethics of its power.

Right now, ethics feels like an afterthought in the AI race. The focus is on short-term goals—getting eyeballs, cutting costs, and increasing productivity. Many economists argue that technology boosts productivity and creates new jobs, but AI is a shock to the system. It’s likely to lead to 'tech refugees,' people displaced from their jobs, much like climate refugees. I don’t think we’ve adequately considered this societal impact.

Large companies, constrained by their risk profiles, may struggle with AI adoption. They face significant legal and ethical risks. Meanwhile, small companies might seize short-term opportunities, but this is not a long-term solution. What we need is a comprehensive, multidisciplinary approach. Ethicists, technologists, and even shamans need to be part of the conversation.

AI was first coined at the Dartmouth Conference in the 1950s by John McCarthy, an MIT professor. Perhaps it’s time for a new Dartmouth Conference to address the challenges AI poses today. Rishi Sunak hosted an event recently, which is a start, but we need much more. AI is not as destructive as a nuclear weapon, but its societal impact could be profound. Everyone needs to engage in this dialogue before it overtakes us entirely."

* **Context**: #AI #proliferation\_risk #geopolitics #privatization
* **Speaker**: Professor Sanjay Sarma
* **Answer**:  
   "Yes, AI does pose a high proliferation risk, and here’s why. Unlike nuclear programs, which are typically national endeavors with clear, centralized control, AI is multipolar—even within major countries. It’s also heavily privatized. This creates a situation where private companies, particularly in the U.S., wield enormous power. For example, the resources and venture capital available to a single company in Silicon Valley can surpass the capabilities of entire nations.

This dynamic introduces significant risks. It’s akin to a circular firing squad—no balancing opposition exists, and all it takes is one trigger pull to set off unintended consequences. If countries like Malaysia or Indonesia want to compete in AI, they’ll need to mobilize national programs to match the scale of companies like Anthropic.

What’s missing right now is a collective, global conversation. We’re not exercising the necessary collective wisdom to address these challenges. The privatized and fragmented nature of AI development makes it harder to control and align on common goals, which increases the risks of proliferation."

* **Context**: #AI #government\_regulation #global\_conversation #engineering
* **Speaker**: Professor Sanjay Sarma
* **Answer**:  
   "The failure of governments to effectively regulate AI is a persistent problem in technology. We’ve seen similar challenges with social media—take the Congressional hearings, for example. Even in those settings, there’s a fundamental disconnect between the speed of technological advancement (clock cycles) and the knowledge and preparedness of regulatory bodies.

This is a critical issue, and the responsibility isn’t just on governments. I believe individuals with both intellect and influence, like you, need to participate in these conversations. The global representation in AI governance is also lacking—every region and nation must be part of this dialogue.

There are optimistic views, like Ray Kurzweil’s recent article about AI solving energy problems, which is very utopian. While I believe AI will revolutionize fields like engineering by enabling rapid and creative design (through what’s known as the inverse problem), we cannot ignore the lack of a cohesive, global conversation about its risks and societal impacts.

This absence of discussion deeply worries me. It feels like we’re rushing forward without addressing the fundamental implications of AI. I feel a sense of helplessness, but also a recognition that we need to act quickly and inclusively to ensure that we’re steering AI toward positive outcomes."

* **Context**: #AI #education #critical\_thinking #universities #global\_roles
* **Speaker**: Professor Sanjay Sarma
* **Answer**:  
   "Yes, educational institutions have a critical role in regulating AI, but their responsibilities extend far beyond simply teaching about the technology. Education must serve two main purposes here:

1. **Fostering Critical Thinking**: This isn’t just for educators. Politicians, thought leaders, religious organizations, NGOs—everyone needs to engage in conversations about AI. Critical thinking should be the foundation of how we approach AI governance and ethics.
2. **Advancing Research and Exploration**: Leading universities like MIT, Berkeley, Stanford, Harvard, the IITs, and others must dive deep into fundamental questions: What does it mean to be human? What is intelligence? What is morality? Much of the overconfidence in AI stems from underestimating the complexity and uniqueness of human intelligence.

The role of educational institutions is exciting and essential. They can shape the global understanding of AI by investigating its implications and guiding its development responsibly. This work has already begun, with nonprofits and organizations worldwide contributing, and with regulatory efforts like the EU’s risk-based AI law. However, these initiatives often lack nuance and dialogue. What we need is a deeper, ongoing discussion involving all stakeholders."

* **Context**: #AI #Europe #digital\_revolution #regulatory\_framework
* **Speaker**: Professor Sanjay Sarma
* **Answer**:  
   "Yes, the regulatory framework coming out of Europe reflects their position as not having fully benefited from the digital revolution. Europe needs to reconcile its role on the global stage amidst challenges like energy and demographic shifts. Historically, Europe was the cradle of innovation, the birthplace of the Renaissance. However, in the last 50 to 100 years, the U.S. has taken the lead in technology and innovation, leaving Europe in a more defensive posture.

That said, Europe deserves credit for its pioneering work on GDPR. It’s a global standard for privacy, showcasing leadership in an important area. But the world today is multipolar, with countless moving parts. This complexity makes it incredibly challenging to predict how things will unfold.

My concern is that Europe’s approach—while commendable in intent—might not lead to favorable outcomes because managing global innovation and regulation is akin to herding cats. It requires alignment and cooperation across nations, which remains a significant hurdle."

* **Context**: #China #science #innovation #patents #creativity
* **Speaker**: Professor Sanjay Sarma
* **Answer**:  
   "No, I wouldn’t call China a scientific superpower yet. China is remarkable in many ways—I’ve opened labs there, visited frequently, and worked with exceptional students and colleagues from China. However, assessing creativity and innovation is inherently complex and often relies on flawed metrics like patent filings. Let me give you an example: I hold dozens of patents, but honestly, most of them aren’t groundbreaking. The ones that truly matter—blocking patents—are difficult to quantify. Filing patents can easily become a numbers game that looks good on a résumé but doesn’t necessarily reflect true innovation.

That said, China has done some things exceptionally well. It has invested deeply in talent development, starting at the grassroots level, and launched major technical initiatives. These are significant achievements. However, I’m cautious about overly simplistic conclusions, as creativity is difficult to measure accurately.

While China’s progress should serve as a wake-up call to the rest of the world, it’s not as straightforward as labeling the country a scientific superpower. I think the reality is much more nuanced, and it’s not a black-and-white situation. Kudos to China for its advancements, but we must view these developments with a balanced perspective."

* **Context**: #India #SoutheastAsia #globalrealignment #education #energy #technologyexport
* **Speaker**: Professor Sanjay Sarma
* **Answer**:  
   "Yes, Apple’s massive exports from India signify a pivotal shift in global dynamics. We’re entering a new stage in the planet’s history, where political, energy, and economic alignments are reshaping the world order. Consider the Saudi peace deal tied to nuclear energy or the strategic control of natural gas supplies from regions like Iran and Qatar. Similarly, the export restrictions on semiconductors to China highlight these realignments.

India has historically punched below its weight, but this signals the pendulum swinging. For Southeast Asia, this moment offers both inspiration and a challenge. While the region is wealthier than India in many ways, India’s drive often came from necessity, which spurred innovation and determination. Southeast Asia must leverage its advantages—rich resources, education, and creativity—to lead intellectually and economically.

Critical thinking and creativity are no longer optional—they’re essential, especially given looming challenges like climate change, which disproportionately affect Southeast Asia. The region is blessed with energy resources at a time when the world desperately needs them. Southeast Asia must own its future, export not only goods but ideas, and avoid letting others define its trajectory. Doubling down on education and innovation is the way forward."

* **Context**: #AIenergy #renewables #sustainableAI #low-powerAI #smallerAI
* **Speaker**: Professor Sanjay Sarma
* **Answer**:  
   "If we extrapolate from current trends, the inevitability is clear: grids will become overloaded, and energy sourcing will pose major challenges. Renewable energy, while crucial, can only scale so fast, and there are limits to its capacity. However, the saving grace might be a shift in direction.

What would this shift look like? A focus on reducing energy consumption in AI. We’re already seeing glimpses of a second wave of innovation aimed at creating lower-energy AI systems. Models that can run locally—on laptops or even phones—could significantly reduce energy demands. Localized AI also lowers latency and functions in low-connectivity environments, unlike systems like Siri, which fail without an internet connection.

Instead of massive, general-purpose AI systems that answer everything from how to make falafel to the political history of Mongolia, the future may favor smaller, purpose-built models. These verticalized AIs would be leaner, more efficient, and tailored to specific needs.

If this shift doesn’t happen, we’re on an unsustainable trajectory. But I remain hopeful that the industry will embrace these changes and pivot toward a more sustainable AI ecosystem. Without this shift, we risk hurtling toward an immovable obstacle."

* **Context**: #scalability #AIinnovation #finitegrowth #GPUs #smallerAImodels
* **Speaker**: Professor Sanjay Sarma
* **Answer**:  
   "Yes, I think we’re already witnessing the inherent finite nature of scalability. Nvidia, for example, has dominated the GPU space—not just with their designs but also with their speed of iteration. It’s difficult for competitors to catch up in the foreseeable future. But even Nvidia will face limits, whether due to cost, energy, or other resource constraints.

This inevitability is prompting innovation. Costs are already a concern, and we’re beginning to see alternatives emerge. Open-source and smaller, verticalized AI models are gaining traction. These models might not match the scale or capability of large language models like ChatGPT but can be far more efficient, less power-intensive, and tailored to specific needs. Apple, for instance, is exploring reduced models—less powerful but significantly cheaper and energy-efficient.

Think of it like a tube of toothpaste: if you keep squeezing but don’t remove the cap, the creativity and innovation will find another way out. I believe we’re at the point where we need to ease off from pushing the frontier of massive models and instead explore these smaller, more sustainable frontiers."

* **Context**: #AIdevelopment #humanpotential #cerebralcapacity #futureofAI
* **Speaker**: Professor Sanjay Sarma
* **Answer**:  
   "It’s a fascinating question. To understand AI better, think of how it processes information. When AI reads words, it doesn’t actually retain them. Instead, it distills the words into thousands of dimensions in a vector space. It adjusts these dimensions slightly each time, but the original words are discarded. Eventually, these adjustments saturate, and additional inputs don’t significantly change the model.

Right now, AI excels in pattern recognition but struggles with logic and reasoning. For example, until recently, AI didn’t add numbers the way a child would, using algorithms—it relied on pattern matching. This is a fundamental limitation of the current paradigm.

What excites me—and maybe this is romantic or idealistic—is the prospect of humanity realizing what our 86 billion neurons are capable of. Human society, as a collective network of brains, can brainstorm, collaborate, and generate ideas in ways AI cannot. We have judgment, creativity, and emotional nuance that AI lacks. While AI is a long, linear barrel of capability, human cognition is multifaceted and interconnected.

I believe that as AI continues to develop, its limitations will become clearer, and this will prompt us to better appreciate and explore the incredible potential of the human mind. The interplay between these two intelligences—human and artificial—will define our progress in the years to come."

* **Context**: #AIimpact #happiness #wellbeing #criticalthinking #futurevision
* **Speaker**: Professor Sanjay Sarma
* **Answer**:  
   "Yes, I think AI has the potential to make us happier, wealthier, healthier, and smarter—and even make the planet more sustainable. It’s an optimistic view, and perhaps a bit romantic or idealistic, but I genuinely believe it’s within reach. Imagine a future where AI acts as a kind of guardian angel or personal buddy, helping us navigate life’s challenges. It could gently guide us toward healthier habits—perhaps reminding me to skip that extra hamburger—or support us in making better decisions without being preachy.

The real promise lies in AI’s ability to empower self-awareness and critical thinking. If AI can awaken a deeper sense of self-efficacy in individuals—helping people reflect on what they truly value, whether it’s family, health, or the environment—it can play a transformative role. It’s about shaping AI to align with human values, rather than letting AI shape us.

That’s why I emphasize the importance of learning and awareness. We need to focus on broadening human understanding, especially in underserved regions, where centrifugal thinking—spreading knowledge outward—can counter the centripetal forces of polarization and disconnection. AI has the capacity to either anesthetize or awaken humanity. I believe the key is fostering a culture where people are inspired to think critically, care deeply, and act consciously. If we achieve that, AI could truly help us build a better world."

* **Context**: #AsiaSchoolofBusiness #actionlearning #executiveeducation #innovation #ASBapproach
* **Speaker**: Professor Sanjay Sarma
* **Answer**:  
   "At the Asia School of Business (ASB), we take a transformative approach to education that sets us apart. ASB emphasizes *action learning*, which means our students don’t just acquire knowledge—they learn to think critically and apply their insights in real-world contexts. We integrate abstractions with hands-on experiences, ensuring that learning isn’t confined to theory but is immediately relevant to solving practical challenges.

Our faculty is exceptional, bringing global expertise and local relevance. And we’re not stopping there—we’re entering a new phase with Agile Continuous Education. This initiative allows ASB to meet learners where they are, offering hybrid modules tailored to specific needs, such as equipping executives and their teams with cutting-edge skills in AI. These modules combine action learning with interactive, real-world jam sessions that mirror the collaborative creativity of musicians engaging with their audiences.

ASB’s vision is particularly focused on Southeast Asia and the Middle East, areas ripe for innovative education models. As a smaller, agile institution, we can adapt quickly, implement forward-thinking principles, and remain a leader in educational transformation. If you’re looking for an institution that doesn’t just teach but redefines how learning is delivered and applied, ASB is the place to be."