

HOW TO PLAY

STEP 1: Draw 2 cards from each stack.

STEP 2: Select 1 Substrate card and 1 Application card from the cards drawn. Return the other 2 cards to their stacks.

STEP 3: Take 7 minutes to prepare a pitch. Identify a specific problem in the Application domain AND how computing research innovations within the Substrate could solve it.

STEP 4: Take 2-3 minutes to pitch your vision. The team may present together or designate a lead.

STEP 5: Answer questions for up to 3 minutes.

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PITCH GUIDANCE

Imagine you're speaking with a grant program manager to pitch your idea. The focus should be on optimizing capability, efficiency, or cost.

Consider the following questions:

1. What will you develop and how will we know it worked?
2. What problem are you solving, and why does it matter?
3. Explain what makes your idea new and how it will lead to significant improvements.
4. Why is this visionary and couldn't be done now?

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Email

An office worker's greatest foe, email has thus far proven impervious to all attempts to make it a more effective means of communication.



Interstellar Travel

Arguably humanity's grandest ambition, the possibility of interstellar travel has an allure that generation after generation is captivated by.

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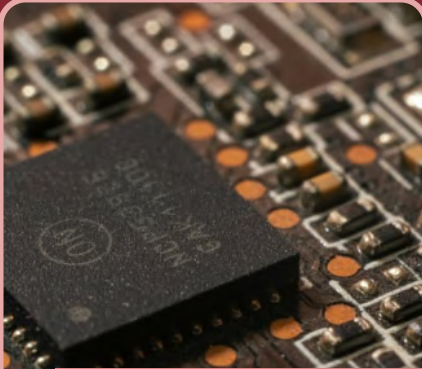


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Hardware Design

Long before software runs, hardware design lays the foundation everything else depends on. Improving it means improving all of computing.



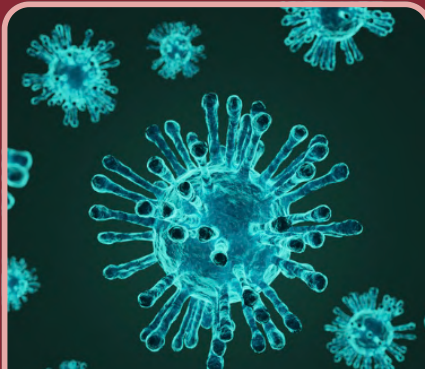
Financial Planning

Responsible financial planning is key to critical life moments like buying a house and retiring, yet it's full of little nuances that can make doing it a nightmare.



Disease Diagnosis

Early and accurate disease diagnosis is the foundation of a cure. And nothing is more discouraging than an ailment with no answers.



Epidemic Control & Prevention

It's easy to take our ability to interact with others in person for granted. Proactive epidemic prevention preserves both lives and sanity.

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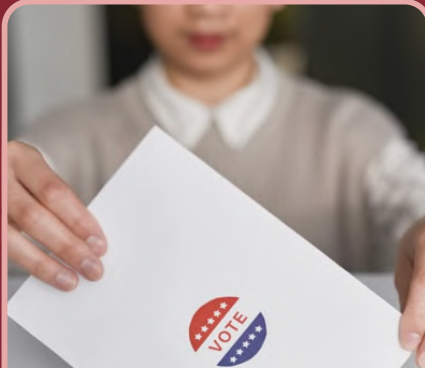
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Environmental Conservation

Animals, plants, fungi, and more all over our planet face unprecedented challenges to their survival. It's up to humans to help keep Earth's biodiversity alive.



Voting Machines

There's no real room for error when it comes to voting machines. Continuing to protect the security of these devices is critical to democracy.



Infrastructure Maintenance

Crumbling bridges, potholes in roads, and derelict parks – infrastructure needs constant maintenance, but it doesn't always get it.



Agriculture

One of humanity's most ancient pursuits. From farming to animal husbandry, millennia have been spent optimizing the production and distribution of food.

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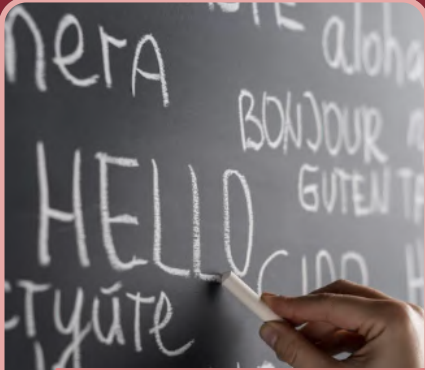
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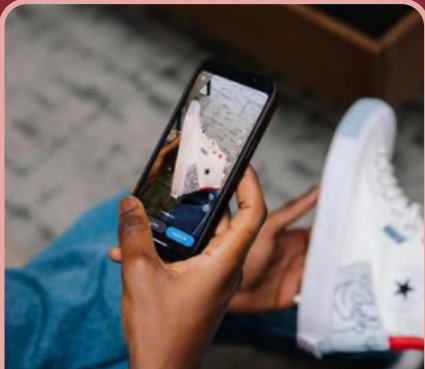
Universal Translation

Tools like the Babel Fish or Universal Translator are sci-fi's attempts to bridge language divides. Today, some languages still evade machine translation.



K-12 Education

Young minds absorb information quickly, if you can deal with their frequent attitude and motivation challenges.



Social Media

Once a way to keep in touch with distant loved ones, social media has become the quickest way to feel bad you've never done – and showed off – that trip to Tokyo.



Demographic Cliffs

With fertility rates plummeting across the globe, young people may soon become a scarce commodity in some parts of the world.

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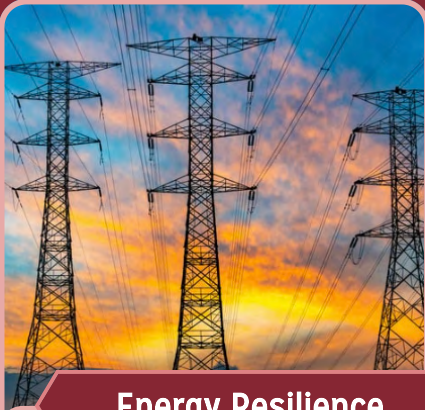
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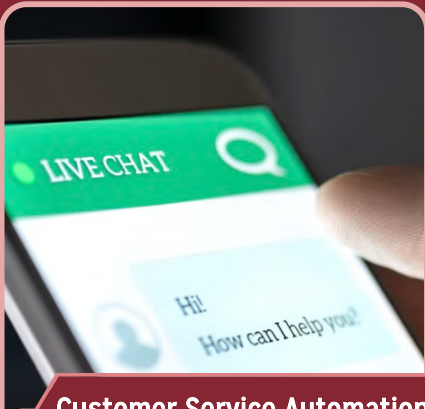
Energy Resilience

Thinking long-term about our energy sources is essential for making sure supply will always be able to meet demand, protecting future generations.



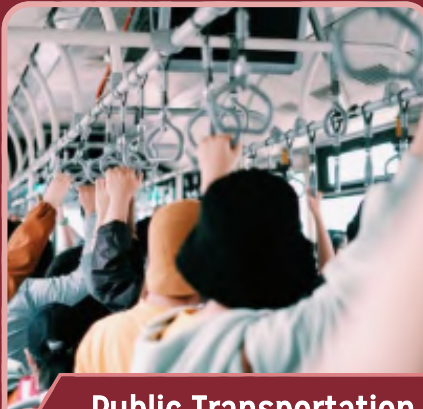
AI Slop Detection

AI literacy is becoming more important than ever, but even the best-trained eyes today have struggled to detect some of the content AI can now generate.



Customer Service Automations

Computing technology at perhaps its most evil. No frustration compares with two hours on the phone with a bank, pressing '0' to try to be connected with an agent.



Public Transportation

Get large amounts of people from here to there safely, reliably, and efficiently. It's a much more complicated task than it may seem at first.

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Aging Population Care

With luck, we all get old. Ideally, structures in place make it so that the care required during these vulnerable years is safe, humane, and kind.



Artificial System Liability

Who is responsible when computing technology like artificial intelligence systems cause harm? It's a hard and uneasy question to answer.



Fraud, Scams, and Identity Theft

From passport scams to AI impersonations, unscrupulous folks use any means at their disposal to steal identities, money, and more.



Energy Storage

Many of our discussions on energy center around how to generate it. But what about storing it, and making sure none is lost in the process?

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Wildcard

There are infinite problems in this world where computing could make a difference. The choice is in your hands, so what will it be?



Quantum Computing

Harness the power of physics to process information and make computing even more powerful.



Biological Computing

Bend living cells to your will, turning them into processors to shape computing's future.



Neuromorphic Computing

Model your hardware off of real living beings for increased energy efficiency.

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Neurosymbolic Computing

Combine pattern-based AI with logical reasoning to attain an accuracy humans only dream of.



Massively-Distributed Computing

Link vast numbers of independent computers or AI agents across a single network to create a powerful hive mind.



Edge Computing

Analyze data at a rapid rate by eschewing the Cloud – rely only on local devices for storage,



Computer Vision

Train machines to extract and analyze data from photos and videos, replicating human vision.

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Virtual Reality

Play God and generate your very own universe to immerse users in.



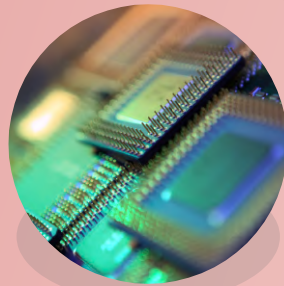
Robotics

Design, construct, and operate machines capable of replicating or assisting humans, inspiring sci-fi films for ages to come.



Cloud Computing

Keep your data on the move, delivering critical computing services over wireless connections.



Heterogeneous Computing

Unite the strengths of different processors to work with unprecedented speed and efficiency.

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Ultra-Low Power Computing

Prioritize extreme energy efficiency, building tech designed to survive with little human intervention.



Wildcard

The farthest reaches of computing are in your grasp. Harness an area of computing of your choice.

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