

The Horizon Newsletter

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Fingerprinting

By: Shrihan Dadi

With the rise of new advances in technology, it has been easier for industries to target and gather information about people online. Fingerprinting is one of the ways industries can create a profile about people. The name comes from the fact that this profile is just as specific as your fingerprint. The ad tech industry, for example, can pinpoint information from browsers. Other industries can gather information and characteristics about your device, like the operating system, device model, and screen resolution. If you put enough of this information together, you get a profile so unique that might as well be your fingerprint or a bar code. This can all (and is) happen in the background without you knowing.

However, there are ways to prevent fingerprinting. You can install add-ons (in your browser) or even switch to another browser (like firefox). On mobile devices, you can delete apps that you don't use (they can have lots of trackers). These methods may not eliminate fingerprinting completely since it's so pervasive but they can certainly reduce it.



Preventing Greenhouse Gases

By: Sumant Anantha

What can be done to prevent the Greenhouse effects from occurring? There are simple steps to prevent this dangerous apocalypse from happening.

Convert any gas used substance to an electric used object. Start restricting companies by asking any type of government for help to the companies that overburn and use fossil fuels as their primary source. Currently an example



of gas conversion to electricity would be from a

Toyota Camry to a Tesla, an electricity powered car.

Electricity is not the only thing to replace fossil fuels

but also solar energy. Solar energy is used by the

gases in the atmosphere which increases the heat. If

we start using Solar energy from Solar panels there

won't be as much gas in the atmosphere to absorb

the energy from the Sun. For an example Solar energy can power a house or a car. The Greenhouse gas will predictably start to go down and the effects

will start to fade away. Malcolm Turnbull, the Australian Prime Minister

stated "Climate change is a global problem. The planet is warming because of

the growing level of greenhouse gas emissions from human activity. If this

trend continues, truly catastrophic consequences are likely to ensue from

rising sea levels, to reduced water availability, to more heat waves and

fires." If we start decreasing the levels of Greenhouse gases from

frightening levels then we could curve Global Warming and avoid these

disastrous consequences.

The Amazon Rainforest

By: Arya Bharti

Most people know about climate change but they don't know how much

worse it would be without the rainforests of the world. Currently, the

Amazon stands as the largest rainforest in the world and is single handedly

responsible for 20% of the world's oxygen supply. The Amazon is so large; if it were a country, it would be ranked as the 9th largest in the world. Unfortunately, just last year, over 3,050 sq miles of it was slashed down between August 2017 and July 2018. Deforestation on this scale is nothing short of an invasion. Brazil's new president, Jair Bolsonaro has been mainly responsible for the sudden increase in deforestation. Recently, the Brazilian government has scaled back efforts to fight illegal logging, ranching and mining in the area as the conditions continue to worsen. The Brazilian part of the Amazon has lost more than 1,330 square miles since Mr. Bolsonaro took office on January 1st, 2019. Recently, at a meeting with some international journalists, he stated "The Amazon is ours, not yours" and argued it should not concern the rest of the world. During a campaign, he threatened to entirely get rid of the Ministry of Environment but refrained after threats of boycotting Brazilian goods. But he continued to weaken the protection of the rainforest by cutting down the main Brazilian environmental agency's budget by 24%. Mr. Bolsonaro has rejected international criticism and argues that protection of large parts of these lands is part of a global plot to stop the development of Brazil. These claims are indeed very similar to Nicolás Maduro who has claimed himself as president of Venezuela for the past 6 years. He is blocking aid to people across the country to create a false image of peace and stability.



Tariffs and Trump: How the President's Ongoing War With China Will Impact Consumers

By: Pranay Koneru

Since the start of his ever controversial and divisive term, President Trump has been known to have a strong stance regarding China's rise to the top of the global market, slapping numerous tariffs on imported goods in order to

weaken their economy. The fourth round of Trump's fruitless efforts took shape on Friday, August 2 after the President tweeted on Thursday that starting September 1, the U.S. would be adding a 10% tariff on the remaining \$300 billion dollars worth of Chinese imports that had been spared duties. In the past, many consumer products-including clothing, electronics, and shoes-had been spared but with the remaining \$300 billion being targeted,



that won't be the case for much longer.

Companies like Sony, the manufacturer of the popular PS4 game console, are already announcing increases in the pricing of future products such as the Playstation 5. Shares of consumer electronics retailer Best Buy slipped almost 11% on Thursday with

shoe-maker Steve Madden following suit

slipping 9%. And the future doesn't seem to be looking any brighter.

According to the Footwear Distributors & Retailers of America, an industry organization with over 500 members, a whopping 70% of shoes sold in the

United States come from China. This statistic implies a drastic rise in

footwear pricing in the near future. On the other hand, large retail and

department stores like Macy's have announced that they already have mitigation strategies in place with each of their categories being looked at

individually. When it comes to an escalation in prices the retailer has said

that it will hold prices on products which are more elastic while raising prices

on others. Even retailers with low exposure to Chinese manufacturing such

as Kate Spade owner Tapestry and Micheal Kors' parent company Capri

Holdings responded negatively to the new tariffs with shares for the former

rising a mere 1% and the latter seeing a drop of 2.7%. Other retailers such as

furniture company RH, formerly known as Restoration Hardware, are

looking at expanding production further, outside of China. The furniture

seller stated that the categories subject to the impending tariffs make up less

than 1% of its total inventory receipts for fiscal year 2019 and less than 2% of

anticipated inventory for fiscal 2020. Still, even with these precautions, RH

saw a loss of more than 2% on Thursday. Numerous business analysts and CEO's have spoken out against the forthcoming tariffs with many calling it "truly shocking" and speaking in favor of consumers. But with his term coming to an end in less than 2 years and the gargantuan public outcry against the various tariffs, we'll just have to wait and see on how President Trump plans to continue his infamous trade war.

FRESH

By: Pavitra Madala

Researchers at Carnegie Mellon published a paper in *Science* describing a new technique, called Freeform Reversible Embedding of Suspended Hydrogels (FRESH), that allows people to 3D bioprint scaffolds out of collagen, the human body's main structural protein. This takes the field of tissue engineering closer to the 3D printing of a full human heart. Organs such as the heart are made out of specialized cells that are held together by a biological scaffold called the extracellular matrix. Until now, it has not been possible to rebuild the extracellular matrix using traditional biofabrication methods. Collagen is a biomaterial that is highly desirable because it is a part of every tissue in our body. However, it is hard to 3D print because it starts out as a fluid. This makes it hard to use when building. FRESH prevents it collagen from deforming. This new discovery can help over 4000 patients that are in need of a heart transplant, and millions of others worldwide who need hearts but cannot be on the waitlist. There is a tremendous need for replacement organs, and this new technique can help solve this global situation.