Tech trends to watch in 2022
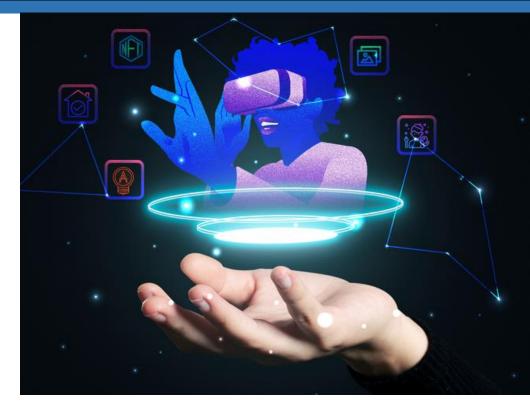
- **Self-fertilizing crops are one of the world's Top 10 Emerging Technologies, according to the World Economic Forum and Scientific American.**
- **Other technology trends include developments in low-carbon shipping and 3D-printed homes.**
- **Expect more buzz around the metaverse in 2022 with lines between the physical and digital worlds continuing to blur.**

Metaverse

Metaverse is one of the hottest buzzwords of the moment. It's basically a virtual world created by combining different technologies, including virtual and augmented reality. While it doesn't technically exist yet, companies like Facebook hope the metaverse will become a place where we go to meet, work, play, study and shop. This 'extended reality' is predicted to be the next evolution of the internet and will blur the lines between physical and digital life. Think in-game purchases, where computer gamers can buy virtual goods and services using real money. Jobs in the metaverse might include personalized avatar creator or metaverse research scientist.

Self-fertilizing crops

Fertilizer containing around 110 million tonnes of nitrogen is used in global crop production every year. This accounts for 1% t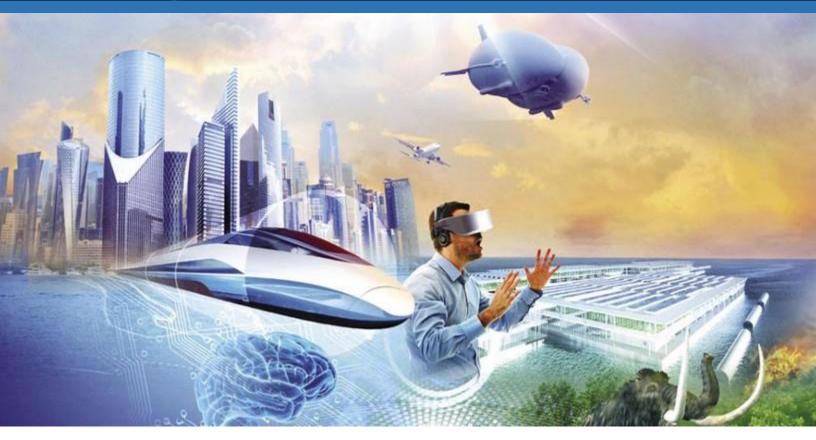o 2% of global carbon dioxide (CO2) emissions. But plants like soy and beans – from the legume family that also includes peas and lentils – use a "clever way" to produce their own nitrogen – according to the Top 10 Emerging Technologies of 2021 report, created by popular science magazine Scientific American and the World Economic Forum. Scientists now hope to "coax" other crops like corn and other cereals to self-fertilize.

3D-printed houses
Feeding materials like concrete, sand and plastics into a massive 3D printer to print homes is a "relatively simple and low-cost construction method," the Forum says in the report.
But lack of infrastructure to transport materials has precluded the use of 3D printing for the remote and emerging regions where it could have the most impact. This could change if more companies follow the lead of Italian 3D printing company WASP, which has demonstrated how to print housing components using local materials like clay soil.

Low-carbon shipping
Today, 2% or less of road transport fleets produce zero emissions. But, as a result of bulk shipping - both rail and seaborne - low-carbon solutions have emerged, says Bernard S. Meyerson, Chief Innovation Officer Emeritus at IBM and Vice-Chair of the Top 10 Emerging Technologies steering group. These include a CO2-emission-free passenger train, the Coradia iLint, and the development of alternative shipping fuels like green ammonia, a carbon-free gas produced using renewable energy.

Cryptocurrencies

Cryptocurrency is moving from the "fringes of finance to the mainstream", according to Thomson Reuters Foundation, the global news and information services company.

El Salvador in Central America became the first country to make bitcoin – the original and most popular cryptocurrency – legal tender in September 2021.

Meanwhile, central banks in Sweden, Canada, the European Union and the United Kingdom are among those considering their own digital currencies.

Not all, however, are embracing this development in the future of finance. Concerns about potential risk and fraud have seen countries including China, Bangladesh, Qatar, Egypt and Morocco ban cryptocurrency. Using vastly powerful computer systems to 'mine' for new crypto is also bad for the environment. But there are tech industry experts who believe that, with regulation, it will become a more sustainable legal tender of the future.

Apply for the Global IT Scholarship Program

Global Information Technology is proud to provide the GIT Scholarship Program. Every month, this scholarship will be awarded to highly driven individuals wanting to begin or advance their IT career. Exclusively, the scholarship will provide a grant of $2,500.00 towards any certification course or remote live training at GIT. GIT created this opportunity to give back to the community and spread our desire to help those in need. We believe that learning is essential and we will continue to help and develop individuals to help them succeed in their personal development goals.

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https://www.global-itech.com/the-global-it-scholarship/

Career Guide

Quick & to the point – Career Advice

Question: *"Andrei, I'm looking for higher pay work. Any suggestions?" – Lionel Harris*

Answer: Do your research. When making a career pivot, it's important to learn as much as you can about the role or industry you're looking to move into. Look at job postings and think about how your skills relate. Go on LinkedIn and look at the profiles of people who have the job you want. Look at their work history and how they describe their roles. Every industry has its own terminology, so make sure you're using that terminology on your resume. Continue to expand your network, too. Talking to people in the industry you're targeting can help you understand the trends and identify which skills will be most important to potential employers. Good things are bound to happen, just keep going. - Andrei

VETERNS, GET READY TO POWER YOUR TECH FUTURE AT GLOBAL IT

Global Information Technology (Global IT) is approved by the Department of Veteran Affairs to receive Veterans benefits. We accept Chapter 33 Post 9/11 GI Bill®, Chapter 30 Montgomery GI Bill® for Active Duty, Ch 31 Vocational Rehabilitation and Employment (VR&E), Vet Tec, and VRRAP. Whether you are serving or have already served, Global Information Technology is here to work with you to start your IT career. These benefits may cover up to 100% of tuition and fees and housing allowance, courseware, and other training-related costs as well. For more information about your specific benefits in regards to your service, call 248-557- 2480 to set up an appointment with one of our School Certified Officers (SCO) (career advisors) or complete the inquiry form at https://www.global-itech.com/va-program/.

DID YOU KNOW?

Technology goes wrong

Three students once installed keystroke loggers onto their teacher's computers to hack and sell grades to students. Through the loggers, they stole test answers and sold them to other students on campus. School authorities found the spyware during a routine check-up of campus computers. As a result, the students were later sent to prison.

GIT thought provoking corner

"Your present circumstances don't determine where you can go. They merely determine where you start."

— Nido Qubein

WE ARE HIRING
JOIN THE SPARTAN FAMILY
MSU IT

Sparty is hiring!

Michigan State University Information Technology has new job openings. If you're looking to further your career in information technology or a related field, have a passion for higher education, and want to contribute to the mission of Michigan State University, they want to hear from you!

The following positions are currently open. To learn more and to apply, follow the links on the job titles below:

New Openings:
Junior Analyst
Reporting to the Zone Manager, the Junior Analyst will make contributions to key values

consisting of customer focus, continuous improvement, innovation and excellence, people, and team spirit. Primary duties include responsibility for workstation setup, support, management, and decommission; triaging incoming customer requests, and handling customer escalations.

IT Support Specialist

Reporting to the IT Manager, the IT Support Specialist will work with staff and students to support faculty and administration with hardware, software and audiovisual (AV) support for the Secchia Center, Grand Rapids Research Center and the Doug Meijer Medical Innovation Building.

Health Colleges Media Services Manager

Reporting to the Manager of Digital Classroom Services, the Health Colleges Media Services Manager will provide daily supervision to 9 staff who are specifically tasked with providing support at the Health College locations in East Lansing, Macomb and Detroit.

Instructional Technology and Development Assistant Director

The Educational Technology department provides technology support for teaching and learning in classrooms, computer labs, and the virtual environment, as well as provides printing, equipment rental, and scoring services for the MSU community. Reporting to the Executive Director of Educational Technology, the Assistant Director for Instructional Technology and Development will provide leadership and support to a team comprised of 11 employees.

Software Developer

Health Applications is a vibrant team supporting academic administrative continuity through IT. This position is for a web application development and support resource for vended and in-house enterprise applications, websites and systems. This role supports operational work related to the Health Colleges application stack, as well as integration and product development support.

Communications Manager

The Communications and Marketing team is responsible for work in media and public information; marketing; public relations; digital strategy;

integrated communications; and strategic partnerships for MSU Information Technology (MSU IT)

Enterprise Development and Integration Manager

Reporting to the Assistant Director of Application Platforms, the Enterprise Development and Integration Manager will manage the administrative and operational activities of a team comprised of 20 employees both vertically and horizontally across the organization to build partnerships that encourage collaboration and cooperation.

Junior Software Developer

Reporting to the Enterprise Development and Integration Manager, the Junior Software Engineer will execute the full software development lifecycle

for JAVA EE applications under the direction of technical leads.

Senior Data Integration Developer

This position will be a member of the Data Integration team that exists within the MSU IT Enterprise Services, Data Management and Analytics department. As a senior data integration developer the position will be responsible for the ongoing support of existing data integrations and the development of new integrations for data sourced from the university student information system and used to support data warehousing.

A day in the life …..

Meet one creator making more money than they ever have before thanks to NFTs.

'I was able to really create my own career'

Marguerite deCourcelle, known as Coin Artist, first got into crypto art when she used images of her oil pastel paintings to create a series of digital puzzles in 2014. One of her most famous, "The Legend of Satoshi Nakamoto" — a nod to the creator/s of bitcoin — went viral within the crypto community, and when solved, unlocked bitcoin prizes.

With her success, deCourcelle dreamed of creating a crypto-game development company, but the blockchain-based assets available at the time were not advanced enough to support her vision, she says.

Marguerite deCourcelle's in-game Neon District character that she sold as an NFT. (Picture on the right.)

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Then, in 2017, CryptoKitties launched. The Ethereum-based game allows users to collect NFTs of digital cats.

Impressed with the technology, deCourcelle and her team used NFTs to create blockchain-based games through her studio, Blockade Games, which launched in 2018. Its flagship game, Neon District, allows users to earn and buy in-game NFT items, like gear for characters.

Blockade Games has made over $333,000 this year, deCourcelle says, and Neon District has generated over $195,000 this year by monetizing NFTs as game assets.

A previously struggling artist, deCourcelle "was able to dig myself out of that and really create my own career," says the 35-year-old, who is now considered a pioneer in the space. "I was able to actually really invest in myself, in my own career and what I wanted to do to take control of my life." DeCourcelle has also made money selling her art as NFTs – about $212,000 in 2020. But she shifted her full attention to her business this year – with the exception of one major project: In May, Christie's will auction an NFT of a piece that she is co-creating.

With NFTs, artists are able to tokenize, own and profit from their digital pieces. So "you're unlocking a whole bunch of people that have never been able to monetize with digital art, which is incredible," she says. "And that's why people are so excited about it."

The shift in technology trends and needs

While requirements for job-specific skills will remain at the core of talent search, interpersonal, cognitive and digital skills are crucial to give an individual the upper hand in tech-driven sectors.

The year 2022 is expected to breathe new life into ambitions and growth prospects, with it predicted to be the harbinger of hope for individuals, job seekers, organizations and industries alike. The goal of an efficient digital economy depends on a business's ability to thrive, and meet the re-defined potential of technology, arising from the limitless pace of digitization. Enterprises are experiencing a welcome surge in business, and the need to service digital-first clients with new-age operations is ramping up steadily. To ensure that businesses fulfill this need, they must bridge critical skills gaps by hiring and upskilling resources, effectively adapting to business scaling

requirements while adding value to end customers.

The right talent pool brings diverse cultures and enriching perspectives together and acts as a critical resource of technical and leadership skills that empowers a company and grows. Today, a renewed skill-dynamics beckons job seekers, as advanced cloud automation, the rollout of 5G, digital computing, IoT, AI and robotics competitively upgrade the job skills landscape. Some job roles will merge with others, making way for new roles as high-level technological, cognitive and emotional skills take over basic problem-solving and manual

skills. Along with the right tools and data structures, companies also need a strong and holistic talent pipeline for responding to business needs and managing expansion effectively.

While requirements for job-specific skills will remain at the core of talent search, interpersonal, cognitive and digital skills are crucial to give an individual the upper hand in tech-driven sectors. When the right workforce is enabled with can provide much-needed support for the implementation of innovative applications and technologies in an automated and digital workplace.