

Information Resources



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How Embedded Systems Impact Your Everyday Life: Every day the world is becoming more and more digital, connected, and automated, but what makes this transformation possible? In many cases, it is a technology that is often overlooked: embedded systems. Embedded systems play a part in nearly every aspect of modern life. They impact the way we spend our leisure time, the way we commute, and the way we do business. In this article, we will give you a primer on what makes a something an “embedded system” and dive into some common use cases for embedded systems that should help drive the concept home. [Story](#)

12 futuristic technologies that could become reality in 2018: In the last year, the business and consumer markets alike have seen the release of advanced technologies that were once considered the stuff of science fiction. Smart gadgets that control every facet of your home, self-driving vehicles, facial and biometric identification systems and more have begun to emerge, giving us a glimpse of the high-tech reality we’re moving towards. To find out which futuristic technologies are on the horizon, we asked a panel of Young Entrepreneurs Council members the following question: In 2017, we saw futuristic tech ideas become reality, from facial recognition applications to Elon Musk’s SpaceX reusable rockets. What futuristic technology might we see released in 2018? Their best answers are included in the [article](#)

Constellation Research: 9 Starting Points for Digital Transformation in Manufacturing: The rise of automation and data exchange in manufacturing technologies means you have new opportunities to undergo digital transformation. Read “9 Starting Points for Digital Transformation in Manufacturing” from Constellation Research for actionable next steps you can take, including: 9 entry points for digital transformation in manufacturing; 6 features of organizations that succeed in digital transformation; and 5 recommendations to ensure digital transformation success. Get the guidance you need to begin your digital transformation journey. [Download](#)

Life in the Most Polluted Capital in the World: In 2016, Ulan Bator overtook both New Delhi and Beijing as the capital with the highest air pollution levels in the world. The city’s topography is one factor: like Beijing, Ulan Bator was built in a river valley and surrounding mountains trap smog like soup in a pan. The extreme climate is another cause. In the world’s coldest capital, the average January low is 27.4 below (-33C) but temperatures can dip beneath -40, the point at which Fahrenheit and Celsius intersect. Locals say winter air pollution was barely noticeable until the mid-2000s. Now, the city has among the world’s highest peaks of PM2.5—the ultrafine particles that can carry carcinogens such as arsenic and mercury and are small enough to permeate most of the body’s defensive filters. In late January, a government-installed sensor reported a PM2.5 per cubic meter rate of 3,320 in parts of Ulan Bator. That’s 133 times the level the World Health Organization (WHO) deems safe. [Read](#)

Job Hunting? 15 Ways to Make Your LinkedIn Profile Work for You: If you’re like a lot of people, you might be wondering what you’re supposed to get out of your LinkedIn profile. A LinkedIn profile can be a powerful tool for career advancement, but you have to know how to use it — just like any other tool. Here’s some solid, actionable advice about how you can make your LinkedIn profile look better to recruiters and hiring managers. [Slide Show](#)

Book: Engineers & Electrons: A Century of Electrical Progress: An informal, popularly-written history of electrical engineering. Spanning two centuries, it is as much a revelation of the human side of engineering as it is the description of the technical accomplishments of the profession. Written by John D. Ryder and Donald G. Fink. [Download](#)

Book: The Making of a Profession: A Century of Electrical Engineering in America: A. Michal McMahon's history of the formation and growth of AIEE., IRE, and IEEE. [Download](#)

Hate to Network? 14 Tricks That Will Help You Succeed at Any Event: Have you ever had those moments where you think of every excuse under the sun not to go to an event for work to network? The thought of gloating about yourself to strangers or engaging in small talk makes your skin crawl, and every time you talk to someone, you overthink the words that come out of your mouth. If this all sounds familiar, it might be a social anxiety — or you might just be human. According to Anxiety and Depression Association of America, about 40 million Americans suffer from some sort of anxiety disorder. So combine that with networking or some work event and that could equal a mess of a situation that one would want to avoid. However, don't hide under the rug just yet, there are ways for people to network without overthinking it and second-guessing themselves. Check out the following 14 tricks you can use to ease your way into feeling comfortable with networking. [Slide Show](#)

15 innovation tips: how large corporations can successfully engage with start-ups: In an increasingly competitive and globalised economy, it is only 'unrelenting innovation' that can help companies sustain a long term advantage, says Gerald Tellis, Director of the Centre for Global Innovation, University of Southern California. Engaging with startups can be one way for corporate giants to get fresh ideas and break out of 'incumbent's curse,' as these 15 tips and examples below show. [Full Post](#)

Mapping the blockchain project ecosystem: Blockchain technology, cryptocurrencies, and token sales are all the rage right now. According to the author of the post who has been working the VC industry, this is by and large the fastest he has seen any area of technology take off in terms of new company (or project) formation. The post provides an overview of each broader category of Blockchain touching on some of the subcategories that comprise them. [Read the post](#)

What researchers want: A wishlist to support openness of research dissemination: Researchers want dissemination of their findings to be simple and increasingly open. They want to use dissemination tools as they choose. They do not want to be bogged down with overly-complex publication guidelines. Sally suggests how libraries, publishers and funders can provide tools and services that assist researchers to adopt open access to their outputs for the benefit of researchers and research, and society. [Presentation](#)

2018 Developer Skills Report: The future of work will be very different. Irrespective of your job, it will become important for everyone to learn how to code. Coding helps enrich your computational thinking, which is powerful in making decisions. The traditional resume will go away and hiring will happen based on your skills first. We launched HackerRank in late 2012 with the goal of matching every developer to the right job. And the growth has been amazing — we reached 3.2M developers in the community and powered 2% of all developer hires last year. For the first time, we surveyed the HackerRank community to get a pulse on developer skills (when did they push code for the first time, how do they learn coding, what are the favorite languages and frameworks, what do they want in a job, what hiring managers want in a candidate, and more). There are some great insights, from 39,441 responses, that we are happy to share with you today. Did you know that 1 in 4 developers learned to code before they could drive? We hope you find the 2018 Developer Skills Report insightful and would love to discuss the findings with you at /r/programming. [Report](#)

Global AI Talent Report 2018: The demand for AI experts has grown exponentially over the last few years. As companies increasingly adopt AI solutions for their businesses, the need for highly experienced, PhD-educated, and technically-adept talent shows no signs of stopping anytime soon. This report summarizes our research into the scope and breadth of the worldwide AI talent pool. Although these data visualizations map the distribution of worldwide talent at the start of 2018, we want to acknowledge that this is a predominantly Western-centric model of AI expertise. [Report](#)

Whose data is it anyway? India's data protection committee starts its consultation tour to find out: As India inches closer towards enacting a law for data protection, an expert committee appointed by the government of India begins today its public consultation process for feedback before it drafts the law. India's data protection framework is based on seven principles, which includes informed consent, data minimisation, and deterrent penalties. The [summary for the white paper](#) explores the scope and exceptions under the framework, raising questions on the definition of personal data, sensitive personal data, data controller, processor, and other aspects like cross border flow of data and data localisation. [Whitepaper](#)

A Look At India's Unique Initiative On Artificial Intelligence Task Force: Now, India has taken a cue from global developments and set up a Task Force on Artificial Intelligence (AI) to drive economic agenda in August. According to PIB, the Commerce and Industry Ministry led by Nirmala Sitharaman set up an AI Task Force last year to accelerate rapid development in the fields of information technology and hardware. While the world is on a cusp on a fourth Industrial Revolution, India is now gearing up to deepen its capabilities in big data, AI, robotics and embed it in its social, economic agenda. The 18-member task force that comprises researchers, academics, experts and industry leaders is headed by IIT Madras's Dr V Kamakoti. [Report of the Task Force](#)

How lines of code kill humans: It was a moonless night of April 12, 2014, in Washington State. A terrified Seattle woman dialed 911 for 37 times and the number was dead. There was a stranger lurking outside her home, and he was trying to break into the house. After a while she was trying for the emergency services in vain, the man managed to crawl through a window. She picked up a knife and the stranger fled. It was later found out that all the emergency services for the state of Washington were in radio silence for an entire 6 hours. [Full Post](#)

The ITIL 2018 update better catch up to modern IT: ITIL, once known as the Information Technology Infrastructure Library, was last updated in 2011. A lot has happened since then, and for an ITIL 2018 release to regain the relevance that the IT service management framework has lost, it must accommodate the drive toward DevOps. [Full Post](#)

How plants could be spying on all of us soon: Humans have been changing nature since agriculture has been feeding them. We select the best seeds, splice and edit them. Even changing the very structure of plants genes, humans have found a way to maximize yield. Plants have been hacked for millennia, but now it's different. The technology currently being developed will catapult any past achievements out of the water by a long shot. The idea of re-engineering plants for military use is as intelligent as it is brave. This time scientists are moving beyond just yield. Scientists at the US Advanced Research Agency are reengineering plants. Turning them into early detection systems for various attacks including: chemical, biological, radiological, nuclear, and explosive (CBRNE) threats. [Full Post](#)

So you want to be a computational biologist?: The term 'computational biologist' can encompass several roles, including data analyst, data curator, database developer, statistician, mathematical modeler, bioinformatician, software developer, ontologist—and many more. What's clear is that computers are now essential components of modern biological research, and scientists are being asked to adopt new skills in computational biology and master new terminology. Whether you're a student, a professor or somewhere in between, if you increasingly find that computational analysis is important to your research, follow the advice below and start along the road towards becoming a computational biologist! [Read](#)

Top 10 Reasons Why You're Not Getting A Job: As a business and career coach, I run into so many different people every day. I attend conferences and events, I run workshops and webinars, and I host team masterminds for all types of professionals. And guess what? When I talk to the unemployed, I've heard all the excuses why you don't have a job. Here are the top ten realities of your job search today: [Read the post](#)

The 80/20 Rule: How the Pareto Principle Can Transform Your Life: Interested in getting maximum results with minimal effort? Then the best thing you can do is implement the 80/20 rule throughout your life. [Read the post](#)

A Primer for 5G: 5G communication is just around the corner. Let's examine the specs of this new standard and how it will impact mobile users, driverless cars, and the Industrial Internet. [Read](#)

A Timeline for When Everything in Your Pocket Will Go Digital: From your driver's license to your house keys to your insurance cards—and everything in between. [Read](#)

Diving Into Data Visualization: In this article, we're going to look at some of the top data visualization articles on DZone, explore data visualization elsewhere on the web, and look at some data visualization publications. [Post](#)

Here's how you can become invisible online: If you are tired of the internet's onslaught on your personal life, so much so that you want to permanently and completely get off it, you absolutely can. With more and more people wanting to go off the grid, corresponding services have cropped up that aid users in doing just that. Let's look at the various measures you can take towards internet invisibility. [Read](#)

Learning Path: Your mentor to become a machine learning expert: Machine learning is a complex topic to master! Not only there is a plethora of resources available, they also age very fast. Couple this with a lot of technical jargon and you can see why people get lost while pursuing machine learning. However, this is only part of the story. You can not master machine learning without undergoing the grind yourself. You have to spend hours understanding the nuances of feature engineering, its importance and the impact it can have on your models. Through this learning path, we hope to provide you an answer to this problem. We have deliberately loaded this learning path with a lot of practical projects. You can not master machine learning with the hard work! But once you do, you are one of the highly sought after people around. Since this is a complex topic, we recommend you to strictly follow the steps in sequential order. Consider this as your mentor for machine learning. Only skip a step, if you know the subject matter mentioned in that step already. [Follow](#)

Diving Into Data Visualization: In this article, we're going to look at some of the top data visualization articles on DZone, explore data visualization elsewhere on the web, and look at some data visualization publications. [Post](#)