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Engineers have created an inflatable robot so nimble it can beat the classic Nintendo game Super Mario Bros. The machine, pioneered by Ryan Sochol, an assistant professor of mechanical engineering, ...

~~Watch a 3D-printed robotic hand play Nintendo~~

During that process ... but all have an open mind and willingness to see new technology help transform their operations. By contrast, they do not have to be degreed engineers as we are not asking the ...

~~The rise of the robot expert~~

With the trends in manufacturing putting a focus on systems becoming more space-efficient, embedding robots more tightly into the process and the versatility ... But now, users can have an open area ...

~~Embedding Robots Into the Process~~

The field of robotic process automation (RPA ... conversation by demonstrating the immediate business benefits and open-ended potential of pervasive workflow automation. Even with the capabilities ...

~~Robotic process automation comes of age~~

Kirkhope explains how researchers are still unearthing new scientific insights into plant motion, which could lead to novel, bio-inspired robotic structures ...

~~Replicating how plants move~~

For most people, the task of identifying an object, picking it up, and placing it somewhere else is trivial. For robots, it requires the latest ...

~~Giving robots better moves~~

Robotmk alerts IT administrators to application performance issues before they affect customers and end-user experience. Developed by IT consulting company Elabit, the plugin uses the popular open ...

~~Robotmk integrates popular open-source tools to deliver affordable, easy-to-deploy end-to-end monitoring~~

The need for automation is higher than ever. Processors of fresh produce have been struggling to fill open positions on their processing lines, even prior to Covid. As a result of ...

~~" We are a single source that handles all automation needs "~~

Artificial Intelligence (AI) has been redefining society in ways we have never anticipated. Technology is clinging to us in every walk of our lives, right from unlocking our smartphones to our ...

~~The smart role of Artificial Intelligence in today ' s world~~

The open-source simulation platform Habitat 2.0's new dataset, ReplicaCAD, supports the movement and manipulation of objects.

~~Facebook Launches Open-Source Simulation Platform Habitat 2.0~~

LONDON, June 10, 2021 /PRNewswire/ -- Robonomics is a ready-to-use open-source tech platform where individuals can connect robots as a service for end-users. The company supports Web3 ...

~~Open Community chat on Robots-as-a-service and Industry 4.0 with Robonomics and MerkleBot~~

Robonomics engineers have unlocked the ability for robots to sell and buy data they gather in the field, autonomously! Utilizing the Ocean Protocol to secure and tokenize datasets, Robonomics — who ...

~~Automated IoT data monetization: A Common Case for Robonomics and Ocean~~

GitHub Copilot, DeepDev, IntelliCode, and other code-focused applications of machine learning can help us deliver better code, faster.

~~AI gives software development tools a boost~~

Symbotic, a robotics and automation-based company focused on reimagining the traditional consumer goods supply chain and Walmart announced they will partner to reimagine the retailer ' s regional ...

~~Walmart Teams Up with Symbotic to Implement Industry-Leading Supply Chain Automation System~~

Dexter, an open-source, high-precision, trainable robotic arm has just been named ... The parallel nature of an FPGA is used to process this positioning data in real time. Recovering from natural ...

~~Dexter Robotic Arm Wins The 2018 Hackaday Prize~~

A list of all the prominent digital transformation service providers operating in the market: Amazon Web Services (Washington, United States), Oracle Corporation (California, United ...

~~Digital Transformation Market Outlook 2021, Global Demand, Key Drivers, Restraints and Future Prospects till 2028~~

It makes it easy, affordable and fast for developers to build software robots and automate manual tasks with first-class, open-source process automation tools. It also provides a robust ...

~~Robocorp Closes $21M Series A Investment Round and Launches Robocorp Control Room, a Self-Managed Bot Automation Platform~~

Just like NYC's flooded subway system, internet infrastructure doesn't attract much attention until there's a notable failure.

~~Extra Crunch roundup: NS1 EC-1, Pakistan ' s tech ecosystem, SPACs bonanza~~

Controlled Thermal Resources says it can extract lithium in a way with a smaller environmental footprint than traditional methods.

~~GM to Source Lithium for EV Batteries from US-Based Startup~~

Previously, during her tenure at SoftBank Robotics ... offers one of the few open-source platforms. Its technology free and accessible since 2009, democratizing process automation technologies ...

In this practical reference, popular author Lewin Edwards shows how to develop robust, dependable real-time systems for robotics and other control applications, using open-source tools. It demonstrates efficient and low-cost embedded hardware and software design techniques, based on Linux as the development platform and operating system and the Atmel AVR as the primary microcontroller. The book provides comprehensive examples of sensor, actuator and control applications and circuits, along with source code for a number of projects. It walks the reader through the process of setting up the Linux-based controller, from creating a custom kernel to customizing the BIOS, to implementing graphical control interfaces. Including detailed design information on: · ESBUS PC-host interface · Host-module communications protocol · A speed-controlled DC motor with tach feedback and thermal cut-off · A stepper motor controller · A two-axis attitude sensor using a MEMS accelerometer · Infrared remote control in Linux using LIRC · Machine vision using Video4Linux The first-ever book on using open source technology for robotics design! Covers hot topics such as GPS navigation, 3-D sensing, and machine vision, all using a Linux platform!

Embedded Systems and Robotics with Open-Source Tools provides easy-to-understand and easy-to-implement guidance for rapid prototype development. Designed for readers unfamiliar with advanced computing technologies, this highly accessible book: Describes several cutting-edge open-source software and hardware technologies Examines a number of embedded computer systems and their practical applications Includes detailed projects for applying rapid prototype development skills in real time Embedded Systems and Robotics with Open-Source Tools effectively demonstrates that, with the help of high-performance microprocessors, microcontrollers, and highly optimized algorithms, one can develop smarter embedded devices.

Intelligence and autonomy are among the most extraordinary capacities blossomed by human evolution. Yet, endowing humanoid robots with these two crucial capabilities is still one of the biggest problems for the robotics community, despite decades of research. On the software side, algorithms for artificial intelligence are still at an embryonic stage. On the hardware side, robotic actuators are a far cry from the muscular human system in terms of flexibility and adaptability, which in turn reduces autonomy and robustness. Underneath the nature of algorithms for intelligence and technology for autonomy, the importance of efficient, scalable implementations of robust software goes without saying. Among the large variety of humanoid robots, the iCub has emerged as one of the most diffused research platforms. It has been developed as part of the RobotCub EU project and subsequently adopted by more than 35 laboratories worldwide. Collaborations across laboratories are encouraged by writing code and libraries openly available. As a consequence, iCub is considered to be the ideal platform for experimenting and advancing open-source software for research in several domains, ranging from motor control to cognitive systems.

Artificial Intelligence for Future Generation Robotics offers a vision for potential future robotics applications for AI technologies. Each chapter includes theory and mathematics to stimulate novel research directions based on the state-of-the-art in AI and smart robotics. Organized by application into ten chapters, this book offers a practical tool for researchers and engineers looking for new avenues and use-cases that combine AI with smart robotics. As we witness exponential growth in automation and the rapid advancement of underpinning technologies, such as ubiquitous computing, sensing, intelligent data processing, mobile computing and context aware applications, this book is an ideal resource for future innovation. Brings AI and smart robotics into imaginative, technically-informed dialogue Integrates fundamentals with real-world applications Presents potential applications for AI in smart robotics by use-case Gives detailed theory and mathematical calculations for each application Stimulates new thinking and research in applying AI to robotics

Focuses on the concept of open source prototyping and product development and designing sensor networks and covers IoT base applications This book will serves as a single source of introductory material and reference for programming smart computing and Internet of Things (IoT) devices using Arduino with the use of Python It covers number of comprehensive DIY experiments through which the reader can design various intelligent systems

This Robotics Process Automation book describes the RPA platform for the future of business process automation. More precisely this RPA book has tried to innumerate the followings: 1. RPA that brings speed to your digital transformation. 2. RPA helps to get rid of resource burden and it's consequences. 3. This emphasizes Business process automation must be in the hands forntline. 4. Only Automation Anywhere Enterprise combines consumer-like usability with enterprise-class reliability, and security for RPA that empowers the workforce to automate on their own, in real time. 5. What does RPA mean for business? Optimize labour investment Increase capacity on demand Increase speed and productivity Maximize availability Improve business process compliance Improve controls Improve auditability Enhance security deliver business intelligence Enable digital transformation Improve employee morale 6. Putting RPA to work and deploy your digital workforce in your businesses like insurance, finance, manufacturing and health care and also other. Deploy, manage and audit your Digital Workforce through a highly-intuitive RPA central command center, on-premise or in the cloud. This RPA book also enable you to learn more about AI and machine language also factory automation, safeguard your data, analyze ald predict business performance, streamline your blended anywhere, big data ready for analytics. This book is made for BS/B,TECH and MS/M.TECH/MCA/MBA student who will have in-depth knowledge about RPA and its associated technologies falls in the same platform.

This book presents the proceedings of two conferences, the 37th and 38th in the WoTUG series; Communicating Process Architectures (CPA) 2015, held in Canterbury, England, in August 2015, and CPA 2016, held in Copenhagen, Denmark, in August 2016. Fifteen papers were accepted for presentation at the 2015 conference. They cover a spectrum of concurrency concerns: mathematical theory, programming languages, design and support tools, verification, multicore infrastructure and applications ranging from supercomputing to embedded. Three workshops and two evening fringe sessions also formed part of the conference, and the workshop position papers and fringe abstracts are included in this book. Fourteen papers covering the same broad spectrum of topics were presented at the 2016 conference, one of them in the form of a workshop. They are all included here, together with abstracts of the five fringe sessions from the conference.

This book provides a review of precision agriculture technology development, followed by a presentation of the state-of-the-art and future requirements of precision agriculture technology. It presents different styles of precision agriculture technologies suitable for large scale mechanized farming; highly automated community-based mechanized production; and fully mechanized farming practices commonly seen in emerging economic regions. The book emphasizes the introduction of core technical features of sensing, data processing and interpretation technologies, crop modeling and production control theory, intelligent machinery and field robots for precision agriculture production.

While Robotic Process Automation (RPA) has been around for about 20 years, it has hit an inflection point because of the convergence of cloud computing, big data and AI. This book shows you how to leverage RPA effectively in your company to automate repetitive and rules-based processes, such as scheduling, inputting/transferring data, cut and paste, filling out forms, and search. Using practical aspects of implementing the technology (based on case studies and industry best practices), you ' ll see how companies have been able to realize substantial ROI (Return On Investment) with their implementations, such as by lessening the need for hiring or outsourcing. By understanding the core concepts of RPA, you ' ll also see that the technology significantly increases compliance – leading to fewer issues with regulations – and minimizes costly errors. RPA software revenues have recently soared by over 60 percent, which is the fastest ramp in the tech industry, and they are expected to exceed $1 billion by the end of 2019. It is generally seamless with legacy IT environments, making it easier for companies to pursue a strategy of digital transformation and can even be a gateway to AI. The Robotic Process Automation Handbook puts everything you need to know into one place to be a part of this wave. What You'll Learn Develop the right strategy and plan Deal with resistance and fears from employees Take an in-depth look at the leading RPA systems, including where they are most effective, the risks and the costs Evaluate an RPA system Who This Book Is For IT specialists and managers at mid-to-large companies

This book brings together experts from research and practice. It includes the design of innovative Robot Process Automation (RPA) concepts, the discussion of related research fields (e.g., Artificial Intelligence, AI), the evaluation of existing software products, and findings from real-life implementation projects. Similar to the substitution of physical work in manufacturing (blue collar automation), Robotic Process Automation tries to substitute intellectual work in office and administration processes with software robots (white-collar automation). The starting point for the development of RPA was the observation that – despite the use of process-oriented enterprise systems (such as ERP, CRM and BPM systems) – additional manual activities are still indispensable today. In the RPA approach, these manual activities are learned and automated by software robots, either by defining rules or by observing manual activities. RPA is related to business process management, machine learning, and artificial intelligence. Tools for RPA originated from dedicated stand-alone software. Today, RPA functionalities are also integrated into elaborated process management suites. From a conceptual perspective, RPA can be structured into input components (sensors in the wide sense), an intelligence center, and output components (actuators in the wide sense). From a strategic perspective, the impact of RPA can be related to the support of existing tasks, the complete substitution of human activities, and the innovation of processes as well as business models. At present, high expectations are related to the use of RPA in the improvement of software-supported business processes. Manual activities are learned and automated by software robots that interact with existing applications via the presentation layer. In combination with artificial intelligence (AI) as well as innovative interfaces (e. g., voice recognition) RPA creates a novel level of automation for office and administration processes. Its benefit potential reaches a return on investment (ROI) up-to 800% that is documented in various case studies.