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CHRONICLE OF DIGITAL TRANSFORMATION THROUGH INTERNET OF THINGS TECHNOLOGIES

Some biweekly perspectives from
around the globe gathered by
CDAIT

(2450 entries since April 1, 2022)
https://cdait.gatech.edu/sites/default/files/2024-05/Digital_Transformation_Through_IoT_Technologies_May_15_2024.pdf

GOVERNANCE & THE INTERNET OF THING

Chris Riotta, "US and China to Hold Discussions on AI Risks and Security," Gov Info Security, May 13, 2024
<https://www.govinfosecurity.com/us-china-to-hold-discussions-on-ai-risks-and-security-a-25181>

Guest Contributor, "Why your company should master third-party audits," Food Safety News, May 13, 2024
<https://www.foodsafetynews.com/2024/05/why-your-company-should-master-third-party-audits/>

FinSMEs (U.K.) posting, "Public Safety Initiatives and the Internet of Things," FinSMEs, May 9, 2024
<https://www.finsmes.com/2024/05/public-safety-initiatives-and-the-internet-of-things.html>

François Baldassari, "Regulators are coming for IoT device security," Help Net Security, May 9, 2024
<https://www.helpnetsecurity.com/2024/05/09/iot-device-security/>

John Gallagher, "RSAC 2024 [May 6-9, 2024, San Francisco, California]: IoT Security Questions (and Answers)," Viakoo, May 7, 2024
<https://www.viakoo.com/blog/rsac-2024-iot-security-questions-and-answers/>

Krupa Patil, "The NIS2 [European Union's revised Network and Information Security Directive] Compliance Deadline [October 18, 2024] Is Nearing. Are You Prepared?" Security Boulevard, May 7, 2024
<https://securityboulevard.com/2024/05/the-nis2-compliance-deadline-is-nearing-are-you-prepared/>

Ryan Daws, "Global agencies warn of increased cyberattacks against OT devices," IoT News, May 2, 2024
<https://www.iotnews.com/news/2024/may/02/global-agencies-warn-of-increased-cyberattacks-against-ot-devices/>

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Biweekly IoT News Digest (5/24 – 1)

Georgia Tech IoT-related Info/Research Noticed by CDAIT

IoT News and Market Reports

(First Half of May 2024)

- Selected IoT-related announcements and featured activities/topics gathered by CDAIT from governments; agencies; consortia; alliances; associations; standards, research and other similar groups around the world – 15 entries:
https://cdait.gatech.edu/sites/default/files/2024-05/IoT_News_Filings_May_2024_First_Half.pdf
- Sample list of IoT-related market reports gathered by CDAIT – 65 entries: https://cdait.gatech.edu/sites/default/files/2024-05/IoT_Market_Reports_May_2024_First_Half.pdf
- Tess Malone, "Georgia Tech Is at the Leading Edge of Semiconductor Research," Georgia Tech Research, May 7, 2024
<https://research.gatech.edu/feature/chips-research>
- Karakaya, Şakir, Murat Yildirim, Nagi Gebrael, and Tangbin Xia, "A sensor-driven operations and maintenance planning approach for large-scale leased manufacturing systems," International Journal of Production Research (2024): 1-18.
<https://www.tandfonline.com/doi/abs/10.1080/00207543.2024.2347564>
- Huang, He, Shigang Chen, Ran Ben Basat, Haipeng Dai, Amirhosein Taherkordi, and Jun Xu. "Guest Editorial Introduction to the Special Section on Next-Generation Traffic Measurement With Network-Wide Perspective and Artificial Intelligence," IEEE Transactions on Network Science and Engineering 11, no. 3 (2024): 2332-2337
<https://ieeexplore.ieee.org/abstract/document/10510331>

OF NOTE: The Cybersecurity and Infrastructure Security Agency (CISA) launched on May 8, 2024 "We Can Secure Our World," the second PSA [Public Service Announcement] in its Secure Our World cybersecurity public awareness program [CISA's first ever PSA was launched in September 2023]. The PSA will be promoted widely across the U.S. on television, radio, digital ads, retail centers, social media platforms, and billboards throughout 2024 See: CISA May 8, 2024 press release, "CISA Unveils New Public Service Announcement – We Can Secure Our World," <https://www.cisa.gov/news-events/news/cisa-unveils-new-public-service-announcement-we-can-secure-our-world>

Special Reading Suggestions

- Hafezad Abdullah, Khairul, Novri Gazali, Rometdo Muzawi, Elgamar Syam, Mohd Firdaus Roslan, and Davi Sofyan, "Internet of Things (IoT) in Education: A Bibliometric Review," International Journal of Information Science and Management 22, no. 1 (2024): 183-202.
<https://repository.uir.ac.id/23150/1/9.%20Scopus%20Q3%20IJISM.pdf>
- Mark Vena, "The Internet of Things Market Grows Up," Forbes, May 9, 2024 <https://www.forbes.com/sites/forbestechcouncil/2024/05/09/the-internet-of-things-market-grows-up/?sh=dfca94e80d06>
- James Blackman, "Eight ways LTE Cat 1bis has usurped NB-IoT/LTE-M as the king tech in cellular IoT," RCR Wireless, May 7, 2024
<https://www.rcrwireless.com/20240507/fundamentals/eight-ways-lte-cat-1bis-has-usurped-nb-iot-lte-m-as-the-king-tech-in-cellular-iot>
- Przemek Szlefer, "Smart Supply Chain Management: Implementing IoT Technologies To Optimize Supply Chain Visibility," Forbes, May 7, 2024 <https://www.forbes.com/sites/forbestechcouncil/2024/05/07/smart-supply-chain-management-implementing-iot-technologies-to-optimize-supply-chain-visibility/?sh=3b7da4ee6c09>
- David Greenfield, "How to Approach the Risks of IoT Technology," [about resources from the National Institute of Standards and Technology (NIST)], Automation World, May 6, 2024 <https://www.automationworld.com/factory/iiot/article/55036826/how-to-approach-the-risks-of-iiot-technology>
- Taylor Miller, "The Age of Smart: IoT Technology and Smart Buildings," Think Reality, May 2, 2024 <https://thinkreality.com/article/the-age-of-smart-iot-technology-and-smart-buildings/>

Selected IoT Perspectives

Could the Rust programming language be the next big step forward for IoT developers?

"While the transition to Rust in IoT development comes with challenges, notably the steep learning curve and the current dominance of NodeJS and Python in IoT, the long-term benefits of Rust in terms of performance, safety, and efficiency are undeniable. For IoT professionals, embracing Rust could mean not only keeping pace with technological advancements but also staying ahead in a rapidly evolving field." Ray Thomas, "Rust: Bridging the Gap in High-Level Language IoT Innovation" IoT for All, February 6, 2024 <https://www.iotforall.com/rust-bridging-the-gap-in-high-level-language-iot-innovation>

- Simplilearn posting, "Rust vs Python: Which Programming Language Leads in 2024?" Simplilearn, March 4, 2024
<https://www.simplilearn.com/rust-vs-python-article>
- Samarpita Chakraborty, "5 Fantastic Benefits of Learning Rust for Developers," June 9, 2024 <https://www.analyticsinsight.net/5-fantastic-benefits-of-learning-rust-for-developers/>
- Datalns Technology, "Rust in the Internet of Things (IoT): Building Secure and Reliable Devices," October 30, 2023
<https://www.linkedin.com/pulse/rust-internet-things-iiot-building-secure-reliable-qfnqc>
- Arthur C. Codex, "Rust and Internet of Things (IoT): A Basic Guide," Reintech Media, September 9, 2023
<https://reintech.io/blog/rust-and-iiot-a-basic-guide>
- Mattia Fiumara, "Rust for IoT: Is It Time?" Medium, October 9, 2022 <https://betterprogramming.pub/rust-for-iiot-is-it-time-67b14ab34b8>
- Craig Beddis, "Why Rust is the best language for IoT development," Information Age, September 2, 2021
<https://www.information-age.com/why-rust-best-language-for-iiot-development-18669/>

Research background info (sample): Klabnik, Steve, and Carol Nichols, "The Rust programming language," No Starch Press, 2023 [Book preview](#); Sharma, Ayushi, Shashank Sharma, Santiago Torres-Arias, and Aravind Machiry, "Rust for Embedded Systems: Current State, Challenges and Open Problems," arXiv preprint arXiv:2311.05063 (2023) <https://arxiv.org/abs/2311.05063>; Joseph Faisal Nusairat, "Rust for the IoT: Building Internet of Things Apps with Rust and Raspberry Pi," Apress, 2020 <https://www.amazon.com/RUST-IOT-Faisal-Nusairat/dp/1484267575>; Rust Foundation <https://foundation.rust-lang.org/>;

<https://cdait.gatech.edu>



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