

# **Cybersecurity in the 5G-connected IoT World: Recent Developments and Future Trends**

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## **Abstract:**

Due to the modern technological advancements and innovations, computers are not just limited to the desktop, laptop or portable devices, but they are proliferating into various areas of our lives and blurring the lines between reality and fiction. This fact is becoming truth due to the emergence of Internet of Things (IoT), which unites physical and virtual worlds by extending computing, intelligence, and connectivity capabilities to everyday things e.g. smart cars, refrigerators, and home appliances, etc. IoT is ushering in a new era which is transforming the way we work, live, communicate and perform businesses. The dawn of 5G with the promise of ultra-high speed, massive bandwidth, and super-low latency is the building block of making this all happen with more IoT-friendly ecosystem and its applications in automotive, healthcare, energy, aerospace & defense, industrial, and consumer electronics products, etc. However, this unprecedented dependence and increased connectivity of billions of connected IoT devices could lead to a multitude of unexpected cybersecurity risks and threats, which may have serious ramifications beyond our imagination. In this speech, we would dissect cybersecurity challenges and concerns in the 5G connected IoT-enabled world. Furthermore, we would explore some peculiar problems inherent in 5G and IoT ecosystem, which could exacerbate the risks of cybersecurity breaches, crimes, and attacks. Finally, we would discuss some of our research contributions as well as future trends in this domain.