# Decoding IT Disruptions: My IT Career Amid Key Technological Evolutions

My IT career began in 1992 at GP Cotton and Oil company Limited as a Data Entry Operator cum Programmer. The technological landscape of that era was vastly different from today's – the internet was absent, desktop PCs had limited RAM, and we relied on 5.2-inch floppy disks, MSDOS, and the Windows 3.1 GUI. Our daily tools included WordStar for document management, Lotus 123 for spreadsheets, dot matrix printers, and dBase III+ and FoxBase for databases. Our primary programming languages were Cobol, Fortran 77, Pascal, and GW Basic.

Just five to six years later, in 1997, the IT world had already begun a significant shift. While still in its early stages for many, the internet was gaining momentum. Creating a Google email account required a referral, and multiple search engines were competing for prominence. Client-server architecture was the prevailing model, and the concept of a powerful handheld computer remained a futuristic notion.

Looking back over the subsequent 32 years, the transformation has been truly revolutionary. For those of us in IT, our careers have been a constant process of adapting to disruptive forces and adopting the innovative tools and technologies that have arisen.

This article aims to explore the major IT disruptions we've experienced since the 1990s and the crucial technological advancements that have not only tackled these challenges but have also ushered in entirely new ways of working.

## Disruption #1 - Dotcom boom:

The late 1990s and early 2000s were marked by the dawn of the internet era and the dot-com disruption. The rapid proliferation of web-based companies and the promise of a new digital economy fueled unprecedented investment and excitement. Businesses rushed to establish an online presence, leading to the development of early e-commerce platforms and a growing demand for high-speed internet infrastructure. However, the speculative bubble burst dramatically, serving as a crucial lesson in the viability of online business models and the importance of sustainable growth. This disruption, while painful for many, laid the groundwork for the internet as a fundamental platform for commerce, communication, and information sharing, driving the evolution of more robust and scalable online technologies.

## Disruption #2 – Mobile Revolution:

The mid-2000s ushered in the mobile revolution, a disruption that fundamentally changed how we interact with technology. The advent of smartphones and later, tablets, moved computing from the desktop to our hands. This shift impacted everything from how we access information and communicate to how businesses reach their customers. The demand for mobile applications and seamless mobile internet experiences spurred the development of powerful mobile operating systems like iOS and Android. Mobile app development became a critical skill, and the need for websites to adapt to different screen sizes led to the evolution of responsive web design.

## Disruption #3 – Social Media Revolution:

Around the same time (mid-2000s), the social media phenomenon emerged, connecting billions of people worldwide. Platforms like Facebook, Twitter, and LinkedIn disrupted traditional forms of communication, marketing, and even social interactions. Businesses had to adapt their strategies to engage with customers on these new platforms, leading to the development of social media management tools and a growing focus on data analytics for social insights to understand audience behavior and campaign effectiveness. Traditional media outlets also faced disruption as news and information consumption shifted online.

## Disruption #4 – Cloud Computing:

The late 2000s witnessed the rise of cloud computing, a paradigm-shift in how IT resources are delivered and consumed. The idea of accessing computing power, storage, and software over the internet disrupted the traditional model of owning and managing on-premises infrastructure. Cloud service providers like AWS, Azure, and GCP built massive data centers to offer scalable and on-demand services, providing businesses with flexibility, cost-effectiveness, and increased agility. Virtualization technologies and sophisticated cloud management platforms became essential for managing these complex cloud environments.

## Disruption #5 – Big Data:

As our digital footprint grew, so did the volume of data. The early 2010s marked the arrival of the age of big data. The sheer scale and velocity of data generated by online activities, sensors, and connected devices presented both challenges and opportunities. Traditional data processing methods were no longer sufficient, leading to the development of big data processing frameworks like Hadoop and Spark, as well as advanced data warehousing solutions and business intelligence tools to extract meaningful insights from these vast datasets.

## Disruption #6 – Artificial Intelligence (AI):

The mid-2010s saw a significant resurgence in artificial intelligence (AI) and machine learning (ML). Advances in computing power and the availability of large datasets enabled breakthroughs in areas like image recognition, natural language processing (NLP), and predictive analytics. AI and ML began to disrupt various industries through automation, personalized experiences, and improved decision-making. This era saw the evolution of powerful AI and ML platforms and tools like TensorFlow and PyTorch, making these technologies more accessible to developers and businesses.

## Disruption #7 – Internet Of Things (IoT):

The Internet of Things (IoT) also gained momentum in the mid-2010s, with everyday objects becoming increasingly connected. This proliferation of connected devices generated even more data and opened-up new possibilities for automation, remote monitoring, and data-driven services across industries like manufacturing, healthcare, and smart homes. The management and analysis of data from this vast network of devices led to the development of specialized IoT platforms and the increasing importance of edge computing to process data closer to its source.

## Disruption #8 – Blockchain & Crypto:

While initially known for its role in cryptocurrencies, blockchain technology, which gained mainstream attention in the 2010s, presented a fundamentally different approach to data security and trust. Its decentralized and transparent nature has the potential to disrupt various industries beyond finance, including supply chain management, digital identity, and voting systems. The evolution of various blockchain platforms, smart contracts, and decentralized applications (dApps) continues to explore these possibilities.

## Disruption #9 – COVID-19:

The remote work transformation, dramatically accelerated by the COVID-19 pandemic in 2020, represented a significant disruption to traditional workplace norms. Companies had to rapidly adapt their IT infrastructure and security protocols to support a distributed workforce. This led to the widespread adoption of collaboration and communication tools like Zoom, Microsoft Teams, and Slack, as well as the reinforcement of VPNs and enhanced cybersecurity solutions to ensure secure remote access and data protection.

## Disruption #10 – Gen-AI:

Most recently, the early 2020s have witnessed the rapid advancement of generative AI. The ability of AI models to create realistic text, images, code, and other media is evolving at an astonishing pace, promising to disrupt creative industries, software development, and content creation. The development of large language models, diffusion models, and user-friendly AI art generators highlights this transformative potential.

## Conclusion:

Looking back over the past quarter-century, it's clear that the IT industry has been in a constant state of flux, driven by a series of significant disruptions. Each of these disruptions has not only presented challenges but has also spurred incredible innovation, leading to the evolution of new technologies that have reshaped our world. These disruptions and the technologies they birthed are often interconnected, building upon each other to create a complex and dynamic digital ecosystem.

As we look to the future, it's certain that new disruptions will emerge, and our ability to adapt, learn, and embrace new technologies will be crucial for navigating the ever-evolving IT landscape. The resilience and innovative spirit of the IT industry, demonstrated time and again since 1990s, will undoubtedly continue to drive us forward in this exciting and transformative journey.