

1) Introduction

When electricity was discovered in the 19th century, it changed the world forever. Homes lit up, industries grew, and life became faster and more connected. Today, something similar is happening with data science. People often call it the “new electricity” because, like electricity, it quietly powers much of what we do—shaping industries, guiding decisions, and improving everyday life in ways we may not even notice.

The Journey of Data Science

The story of data science begins in the **1960s–1980s**, when researchers mainly relied on statistics and early computer models to study data. The work was slow and limited because computers were still developing. In the **1990s**, with the internet spreading across the world, huge amounts of digital information started piling up. This gave rise to databases and tools for storing and organizing data.

By the **2000s**, companies such as Google, Amazon, and Facebook were collecting massive amounts of information about users. This “Big Data” needed smarter methods of analysis, which pushed the field forward. The **2010s** saw a boom in machine learning and artificial intelligence, with cloud computing making it possible for even smaller organizations to use advanced data tools. Now, in the **2020s**, data science is everywhere—combined with deep learning, IoT devices, and even generative AI—just as electricity became part of every household a century ago.

How It Touches Our Lives

1. **Healthcare:** Data science is saving lives. AI systems now scan X-rays and MRIs to spot diseases like cancer earlier than doctors sometimes can. Hospitals also use data to predict patient needs, manage beds, and even track the spread of diseases, as we saw during the COVID-19 pandemic.

2. **Finance:** In banking, data science is like an invisible security guard. It checks millions of transactions in seconds to detect fraud. It also helps banks decide who is eligible for loans and guides investors with smarter trading strategies.
3. **Marketing and Government:** Ever wonder how Netflix knows what to recommend or how ads seem tailored to you? That's data science at work in marketing. Governments too are relying on it—for smarter city planning, reducing traffic jams, and making policies based on real evidence rather than guesswork.

Electricity powered the 20th century, and data science is powering the 21st. From saving lives to protecting money and improving daily experiences, it has become a hidden force shaping the modern world. That is why people call it the “new electricity.”