The applications of Artificial Intelligence lie all around us and affect all aspects of our lives. The results of Artificial Intelligence have been invaluable to biologists, psychologists, and linguists in helping to understand the processes of memory, learning, and language from a fresh angle. As a concept, Artificial Intelligence has fuelled and sharpened the philosophical debates concerning the nature of the mind, intelligence, and the uniqueness of human beings. Artificial Intelligence: A Very Short Introduction considers the history of Artificial Intelligence, its successes, its limitations, and its future goals. It also reviews the philosophical and technological challenges raised by Artificial Intelligence, considering whether programs could ever be really intelligent, creative, or even conscious.

Over the past sixty years, there has been spectacular growth of the technologies associated with the computer. Yet, the science underpinning this technology is less visible and little understood outside the professional computer science community. As a scientific discipline, computer science stands alongside the likes of molecular biology and cognitive science as one of the most significant new sciences of the post-Second World War era. Computer Science: A Very Short Introduction considers the conceptual basis and core principles of computer science. Discussing algorithms, programming, and sequential and parallel processing, it considers emerging modern ideas such as biological computing and cognitive modelling, challenging the idea of computer science as a science of the artificial.

Information: A Very Short Introduction

Luciano Floridi
Information: A Very Short Introduction explores the concept of information, central to modern science and society, from thermodynamics and DNA to our use of the mobile phone and the Internet. It moves from a brief look at the mathematical roots of information — its definition and measurement in ‘bits’ — to its role in genetics, and its social meaning and value, before considering the ethics of information, including issues of ownership, privacy, and accessibility; copyright and open source. This VSI also considers concepts such as ‘Infoglut’ (too much information to process) and the emergence of an information society.

Robotics: A Very Short Introduction
Alan Winfield

Robotics: A Very Short Introduction explains how it is that robotics can be both a success story and a disappointment, how robots can be both ordinary and remarkable, and looks at their important developments in science and their applications to everyday life. Robotics is a key technology in the modern world. They are a well-established part of manufacturing and warehouse automation. More recently robots have taken their first steps into homes and hospitals, and have seen success in planetary exploration. Yet, robots have failed to live up to the predictions of the 1950s and 1960s, when it was widely thought that by turn of the 21st century we would have intelligent robots as butlers, companions, or co-workers.