AI :
TO MY FATHER, YOU SHALL BELONG!

AURELIE ROTARDIER

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You Shall Belong

DU MÊME AUTEUR

Aurélie, Aurélie ... Ma fille !, par Aurélie ROTARDIER, Librinova, 2022.

Que Tes Noms soient honorés, Abba !, par F. GALTIER, A. ROTARDIER, O. TCHOUA,
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PREFACE

Resisting the Age of AI : Towards Safeguarding Truth

Dear Readers,

The era of artificial intelligence has taken flight, propelling humanity to unimaginable technological heights. However, with this surge in new technologies, a shadow grows and looms on the horizon. The threats we face are manifold, insidious, and often imperceptible at first glance. Among them, the specter of Fakery, that elusive scourge which spreads insidiously, sowing doubt and disinformation. Fake news, false propagandas, all these fabricated narratives pervade our modern society, distorting values, undermining truth, and corrupting moral integrity.

In the face of these unprecedented challenges, we are presented with a crucial choice : to crumble under the weight of lies and illusions, or to arm ourselves with steadfast knowledge rooted in the true reality of things. This book emerges in a world where technology seems to allow everything, even the most perverse manipulations of truth. Yet, we must not stand idly by or succumb to apathy, for resisting these threats is not only possible, but essential to preserve the very essence of our humanity.

As a writer, I grasp the magnitude of possibilities that this technological revolution offers. AI is a potent force, capable of enhancing our daily lives, curing diseases, tackling major challenges, and opening new vistas for our future. However, if we are not vigilant, these same technologies can be subverted to sow chaos and division, undermining the foundations of our societies and democracies.

The key to resisting the perils of AI lies in education and knowledge. This book aims to equip you with essential information. Through these pages, you will be encouraged to cultivate a critical mind and question the information you receive, facing fake news and manipulation with discernment and acumen.

Our society requires steadfast landmarks to navigate this complex and uncertain world. Facts and truth must regain their rightful place within our reality. Armed with authentic knowledge, we can withstand deceptive currents and contribute to

the emergence of a benevolent truth. Together, we can erect a bulwark against technological excesses and reaffirm our determination to build a future characterized by progress and mutual respect.

As you journey through these pages, you will realize that the battle for truth is within our reach, and it is together that we shall wage it, armed with knowledge, discernment, and compassion.

Thus, I invite you to immerse yourself in this work with curiosity and an open mind, for resistance is not limited to confrontation, but also to the construction of a world where AI, in service to humanity, will illuminate our path towards a more enlightened, informed, and ethical society.

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PART ONE
AI - An Evolving Synthetic Intelligence

INTRODUCTION

We bear witness to an extraordinary era, where technological advancements are fundamentally reshaping the contours of our society. At the heart of this revolution lies artificial intelligence (AI), a potent discipline that transcends the traditional confines of human thought. From science fiction to tangible reality, AI has insinuated itself into our everyday lives, metamorphosing our way of communicating, working, and even perceiving the world around us.

In an enlightening manner, the rapid strides of AI have presented humanity with unprecedented opportunities. Fields such as medicine, industry, finance, and many others have seen their horizons expanded through the immeasurable capabilities of this technology. AI has ushered in a new era of progress and promises, infusing a prodigious impetus into our unceasing quest to comprehend and master the universe that envelops us.

However, within this dazzling tableau, disquieting shadows loom. Far from being a panacea, AI has engendered complex challenges and dilemmas. Among these challenges, one of the most concerning resides in the collision between AI and the rampant spread of misinformation, commonly referred to as "fake news". Similarly, another insidious threat materializes in the rewriting of history, where AI can be wielded to manipulate and alter historical, political, social, and scientific reality for often deleterious purposes.

My book thus stands as an in-depth exploration of the pivotal issues emerging at the crossroads of AI and our society shaken by disinformation and manipulation. In search of truth and accountability, I herein propose a erudite analysis of the forces at play, the ethical pitfalls that punctuate this trajectory, and potential avenues for responsible AI utilization.

Throughout these pages, I immerse you in the underpinnings of AI, unveiling its intricate mechanisms and burgeoning possibilities. We will underscore the benefits it bestows, but also the formidable traps it spawns in a world besieged by successive waves of false information and manipulations of the past. Our quest for truth will be nourished by rigorous analyses, embracing the ethical questions that stand sentinel-like in this emergent and tumultuous domain.

Hence, it is with an enlightened ambition and a thirst for understanding that I

embark you on this intellectual voyage, with the hope to humbly contribute to a better comprehension of AI and an enlightened awareness of its pivotal role in preserving historical, political, social, and scientific truth and reality. Through this exploration, I aspire to foster an enriching dialogue and incite collective reflection on the pathways to forge a responsible use of AI, thereby securing a more serene future for our society seeking illumination in an ocean of disinformation.

CHAPTER 1
The Foundations of Artificial Intelligence

1.1 : Explanation of the Fundamental Concepts of Artificial Intelligence

Artificial intelligence, a prodigy of human thought, unfolds like a virtuoso tapestry, interweaving millennia of knowledge with modern ingenuity. Founded on the ancestral idea of bestowing machines with the ability to think, AI rests on fundamental concepts that underlie its dazzling evolution.

At the heart of this discipline, the concept of machine learning emerges like a lighthouse, illuminating the path of AI's evolution. Propelled by sophisticated algorithms, this approach enables machines to learn from data, identifying intricate patterns and refining their performance through experience. Supervised learning, an indispensable pillar, guides the machine in learning from labeled examples, allowing it to recognize objects, sounds, and patterns. Concurrently, unsupervised learning unveils an enigmatic realm where the machine feeds on unstructured data to discern associations and groupings, thus weaving the fabric of knowledge. Lastly, reinforcement learning imparts a touch of play, with the machine navigating a dynamic environment, experimenting and optimizing its actions based on rewards and penalties.

In pursuit of emulating human thought, AI also draws upon architectures such as artificial neural networks, inspired by the brain's functioning. These intricate structures, comprised of artificial neurons, evoke complex patterns of human cognition. Significant advancements in this realm have given rise to deep neural networks, revolutionizing computer vision, speech recognition, and natural language processing.

1.2 : Presentation of Different Approaches and Methods in AI

AI, akin to a symphony of enchanting notes, manifests in an array of approaches and methods, each offering a unique palette of possibilities and challenges.

The symbolic approach embodies the emergence of conceptual thought, where AI manipulates symbols and logical rules to solve complex problems. In this semantic ballet, algorithms engage in a dance of abstractions, translating human knowledge into patterns comprehensible to the machine. Decision trees, akin to

roots anchored in human reflection, illuminate optimal choices for problem resolution.

At the frontiers of AI, the probabilistic approach paints a world imbued with uncertainties and probabilities. Bayesian methods, grounded in conditional probabilities, unveil their adeptness at modeling uncertainty, crucial for intricate problems like image recognition or decision-making in uncertain environments.

1.3 : Reflection on Current Progress and Limitations of AI

The melody of AI resonates to the rhythm of a symphony in motion, where progress intertwines with inevitable limitations. These dizzying advancements have propelled AI to once-inaccessible heights.

Spectacular achievements, such as self-driving cars and computer-assisted medical diagnoses, illustrate AI's transformation into a catalyst for innovation.

Nonetheless, echoes of limitations reverberate like obstacles in the tumult of progress. The complexity of tasks, the demand for extensive datasets, and ethical questions loom on the horizon. Supervised learning recedes in the absence of annotated data, while unsupervised learning falters in the abundance of information. Ethical contemplation regarding responsible AI use and algorithmic transparency stands as a pivotal trial to overcome.

At the crossroads of these challenges, the quest for enlightened AI emerges. The hybridization of approaches, exploration of collaborative paths between humans and machines, and establishment of ethical principles grounded in a humanistic perspective illuminate the path ahead. An artificial intelligence in service of humanity, flourishing in its pursuit of knowledge and discovery, awakens on the horizon of possibilities.