# Chapter 2 Algorithmic FinTech Pioneering the Financial Landscape of Tomorrow

Kapil Kumar Aggarwal

b https://orcid.org/0000-0002-2752-9495 Chandigarh University, India

Atul Sharma University School of Business, India

**Rumit Kaur** University School of Business, India

**Girish Lakhera** Graphic Era University (Deemed), India

### ABSTRACT

Algorithmic FinTech emerges as a pioneering force transforming the financial landscape in an era offast technical breakthroughs and a new financial worldview. This study examines Algorithmic FinTech in-depth, providing light on its transformational potential, essential applications, and profound impact on the future of finance. Algorithmic FinTech is applying cutting-edge technology such as artificial intelligence, machine learning, and data analytics to optimize financial processes. This chapter examines algorithms' numerous roles in the financial industry, ranging from risk assessment and trading methods to personal financial management and lending solutions. This chapter provides an in-depth introduction to comprehending the transformational potential of Algorithmic FinTech, its applications, and its influence on traditional banking while emphasizing the importance of responsible innovation in ensuring a robust and equitable financial future.

DOI: 10.4018/979-8-3693-1746-4.ch002

#### INTRODUCTION

The sharing economy, supportive legislation, and information technology are the main drivers of the fast evolution of financial technology (fintech), which is widely acknowledged as one of the most significant developments in the financial industry. 'The FinTech Revolution,' 2015 asserts that fintech will transform the financial sector by generating more stability, diversification, and cost savings in financial services. Startups in the financial technology sector are able to offer specialized, individualised services thanks to advancements in infrastructure, big data, data analytics, and mobile devices, which displace more established financial institutions.

#### DEFINITION OF FINTECH

The invention of Citicorp with a specific project gave birth to fintech. The public's interest in this phenomenon has grown over time. According to Imran (2014), the service sector has made use of Fintech. Particularly for the financial services industry, it suggests a shift (Imran, 2019). Academic and professional periodicals use the term in a wide range of ways.

According to the BFA, Fintech is a technology development that has the potential to revolutionize the way financial services are provided (IMF, 2018).

But according to the FSB, it's a technology that has sparked new business models and boosted innovation in the banking industry (FSB, 2019).

By contrast, Fintech is defined by the OECD as the creative use of digital technology in the financial sector (OECD, 2018).

"Fintech" refers to a range of new business models that have the ability to revolutionize the financial services industry, according to IOSCO (2017).

Lastly, according to the Basel Committee, a Fintech is a business whose primary mission is to offer innovative services, such as the introduction of new financial technology.

Research from PwC (2016) indicates that a significant majority of financial institutions, 83% to be exact, see fintech startups as a threat to their business in various ways. Every financial institution must have the capacity to utilize and/or invest in fintech if it wants to maintain competitiveness in the face of the already substantial influence that fintech companies have on the financial industry.

Investing in financial technology has skyrocketed. During the first quarter of 2016, global investment in fintech initiatives hit \$5.3 billion, up 67% from the same period the year before. The share of investments going to fintech companies in Europe and the Asia-Pacific nearly doubled to 62%, according to Accenture (2016a).

17 more pages are available in the full version of this document, which may be purchased using the "Add to Cart"

button on the publisher's webpage: www.igi-

global.com/chapter/algorithmic-fintech-pioneering-the-

financial-landscape-of-tomorrow/336094

## **Related Content**

## GRASP-Tabu Search Algorithms for the Route Planning Problem in Spatial Crowdsourcing

Mourad Bouatoucheand Khaled Belkadi (2022). International Journal of Applied Metaheuristic Computing (pp. 1-18).

www.irma-international.org/article/grasp-tabu-search-algorithms-for-the-route-planning-problemin-spatial-crowdsourcing/292502

### Fuzzy System Dynamics: An Application to Supply Chain Management

Michael Mutingiand Charles Mbohwa (2014). *Handbook of Research on Novel Soft Computing Intelligent Algorithms: Theory and Practical Applications (pp. 234-257).* www.irma-international.org/chapter/fuzzy-system-dynamics/82694

#### Flexible AC Transmission Systems (FACTS) Controller in Power

#### Transmission

(2019). Optimal Power Flow Using Evolutionary Algorithms (pp. 158-193). www.irma-international.org/chapter/flexible-ac-transmission-systems-facts-controller-in-powertransmission/212080

# Subspace Clustering of DNA Microarray Data: Theory, Evaluation, and Applications

Alain B. Tchagang, Fazel Familiand Youlian Pan (2014). *International Journal of Computational Models and Algorithms in Medicine (pp. 1-52).* www.irma-international.org/article/subspace-clustering-of-dna-microarray-data/148347

### A Fuzzy Model with Thermodynamic Based Consequents and a Niching Swarm-Based Supervisor to Capture the Uncertainties of Damavand Power System

Ahmad Mozaffari, Moein Mohammadpour, Alireza Fathiand Mofid Gorji-Bandpy (2014). *International Journal of Applied Metaheuristic Computing (pp. 9-22).* www.irma-international.org/article/a-fuzzy-model-with-thermodynamic-based-consequents-anda-niching-swarm-based-supervisor-to-capture-the-uncertainties-of-damavand-powersystem/117264