**Technology and Newer Innovations All Involving Science**

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**Sustainable Finance**

* Definition of Sustainable Finance and description of the main elements of it:

Sustainable Finance is the procedure of taking Environmental, Social, and Governance (ESG) factors into consideration when making financial investment decisions **(Zheng et al., 2021).**

Changing climate, moderation, adaptation, and the larger environment are all causes of environmental issues. Conservation of biodiversity, pollution avoidance, and circular economics are all part of it.

Labor relations, investments in human capital and communities, and human rights challenges are examples of social factors.

The governance of governmental and non - governmental businesses, including management structures, employee relations, and executive payment, is critical in ensuring that social and environmental factors **(Popescu & Popescu, 2019).**

Thus, these processes result in more decision-making for funding functions into sustainable economic activities and projects.

* Importance of Sustainable Finance and Inter-connections of it with trending financing policies:

Sustainable Finance is mostly called Environmental/ESG finance. Here, it is a progression of green Finance that leads to financial flow and processes. But Green finance differs only a bit by definition. Yet, most of this emerging Finance has more excellent bonding with sustainable Finance **(Popescu & Popescu, 2019).** Corporate social responsibility and effectiveness constitute part of the overall linkage within Green and Sustainable Finance.

However, The UN has established the Sustainable Development Agenda 2030 to promote the transition to a more inclusive and sustainable economy **(Schoenmaker & Schramade, 2019).** Sustainable Green finance is becoming progressive as it consists of a low carbon economy, which is the key to obtaining a Sustainable Development Goal (SDG) (Ziolo et al., 2021). In areas of essential importance for humankind and the planet, from 2015-2030, the 17 UN Sustainable Development Goals (SDGs) promote action.

In Bangladesh, BB( Bangladesh Bank) has started taking sustainable green initiatives starting sustainable green refinance scheme on 55 projects covering a total of 9 general categories **(Zheng et al., 2021).**

**Blockchain**

Blockchain is a network of blocks accountable for both shared and distributed, digitized ledger/databases. It is unmodifiable accounting of transactions and assets without the incorporation of centralized authority. It needs validations of other users, and miners of virtual currencies are rewarded less than much times the conventional financial transactors. It makes hackers unable to tamper records and excludes Escrew/Intermidiary/Bank Fee and promotes reward-based virtual currency adoption without Overdraft problem association. Blockchain runs upon Bitcoin and other cryptocurrencies. It eliminates double Spending of account ledger by the providence of Blockchain Validators in Public Ledger **(Andoni et al., 2019).**

*Blockchain functions*:

* Transparency in System
* Identity is secured
* Cyber hacks (Hackers to be unable to solve Entire block which needs massive computation system within an only given time and also authorization of currency owners)
* Eliminates unauthorized access by the usage of cryptographic algorithm
* Proof work is challenging to produce but easily be validated **(Finley, n.d.)**
* *Block components*- Previous Hash (One Way Encryption), Data (list of TaransactionValidation-Mining-Mathematical Puzzle, Nonce (Random Value- Hash value to be lesser than the target for miners- Proof of work), Hash (Digital fingerprint- Hash value by SHA-256)
* *Bitcoin Mining*- Currency Miners, need to attain the additional fee occurring during transactions through resources (Time, Money, Record in Public Ledger). There is no other way to mine Bitcoin, and it also becomes halves in amount every four years.

**Machine Learning**

Given new computing innovations, machine learning today has not cared for machine learning of the past. The iterative portion of machine learning is essential, as models may be freely modified to new data. In contrast, many machine learning calculations have been around for quite a while **(Awasthi, 2020).** The capacity to naturally apply complex numerical estimations to enormous data is a new turn of events.

Individuals can utilize machine learning to accomplish more elevated productivity levels, mainly when applied to the Internet of Things (IoT). Most enterprises working with many data have perceived the worth of machine learning innovation.

Banks and other monetary organizations employ innovative machine learning to acknowledge central data and generate experiences. For example, customers with high-risk profiles or digital recognition can distinguish between data mining to identify noticeable extortion warnings **(Davenport, n.d.).**

With machine learning, the calculation finds through experimentation which activities yield the best rewards. Thus, machine learning, a vital aspect of AI, allows IT frameworks to perceive designs based on existing computations and data sets that promote good organizational ideas. That is the reason, in Machine Learning, counterfeit information is created dependent on experience.

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