**ABSTRACT**

**CRYPTOCURRENCY**

 Cryptocurrencies are used primarily outside existing banking and governmental institutions and are exchanged over the Internet. While these alternative, decentralized modes of exchange are in the early stages of development, they have the unique potential to challenge existing systems of currency and payments. As of December 2017 total market capitalization of cryptocurrencies is bigger than 600 billion USD and record high daily volume is larger than 500 billion USD. As of January 2018, there were over 1384 and growing digital currencies in existence.Cryptocurrencies have emerged as important financial software systems. A Cryptocurrency is digital asset designed to work as medium of exchange that uses cryptography to secure its transactions, to control the creation of additional units, and to verify the transfer of assets. They rely on a secure distributed ledger data structure; mining is an integral part of such systems. Mining adds records of past transactions to the distributed ledger known as Blockchain, allowing users to reach secure, robust consensus for each transaction. Mining also introduces wealth in the form of new units of currency. Cryptocurrencies lack a central authority to mediate transactions because they were designed as peer-to-peer systems. The Cryptocurrencies require strong, secure mining algorithms. In this paper we survey and compare and contrast current mining techniques as used by major Cryptocurrencies. We evaluate the strengths, weaknesses, and possible threats to each mining strategy. Overall, a perspective on how Cryptocurrencies mine, where they have comparable performance and assurance, and where they have unique threats and strengths are outlined.

Sanjana Martha(sanjanamartha18@gmail.com)

Banavath Anjali([b.anjali2710@gmail.com](mailto:b.anjali2710@gmail.com))

G.NARAYANAMMA INSTITUTE OF TECHNOLOGY AND SCIENCE