**LITERATURE SURVEY**

**1)A Peer-to-Peer Electronic Cash System**

**AUTHORS:**  **Satoshi Nakamoto**

A purely peer-to-peer version of electronic cash would allow online payments to be sent directly from one party to another without going through a financial institution. Digital signatures provide part of the solution, but the main benefits are lost if a trusted third party is still required to prevent double-spending. We propose a solution to the double-spending problem using a peer-to-peer network. The network timestamps transactions by hashing them into an ongoing chain of hash-based proof-of-work, forming a record that cannot be changed without redoing the proof-of-work. The longest chain not only serves as proof of the sequence of events witnessed, but proof that it came from the largest pool of CPU power. As long as a majority of CPU power is controlled by nodes that are not cooperating to attack the network, they'll generate the longest chain and outpace attackers. The network itself requires minimal structure. Messages are broadcast on a best effort basis, and nodes can leave and rejoin the network at will, accepting the longest proof-of-work chain as proof of what happened while they were gone.

**2) E-Voting with Blockchain: An E-Voting Protocol with Decentralisation and Voter Privacy**

**AUTHORS**: **Freya Sheer Hardwick, Apostolos Gioulis, Raja Naeem Akram, and Konstantinos Markantonakis**

Technology has positive impacts on many aspects of our social life. Designing a 24 hour globally connected architecture enables ease of access to a variety of resources and services. Furthermore, technology like the Internet has been a fertile ground for innovation and creativity. One such disruptive innovation is blockchain – a keystone of cryptocurrencies. The blockchain technology is presented as a game changer for many of the existing and emerging technologies/services. With its immutability property and decentralised architecture, it is taking centre stage in many services as an equalisation factor to the current parity between consumers and large corporations/governments. One potential application of the blockchain is in e-voting schemes. The objective of such a scheme would be to provide a decentralised architecture to run and support a voting scheme that is open, fair, and independently verifiable. In this paper, we propose a potential new e-voting protocol that utilises the blockchain as a transparent ballot box. The protocol has been designed to adhere to fundamental e-voting properties as well as offer a degree of decentralisation and allow for the voter to change/update their vote (within the permissible voting period). This paper highlights the pros and cons of using blockchain for such a proposal from a practical point view in both development/deployment and usage contexts. Concluding the paper is a potential roadmap for blockchain technology to be able to support complex applications.

**3)** **How blockchain-timestamped protocols could improve the trustworthiness of medical science**

**AUTHORS:**  Kan Yang, Xiaohua Jia, Kui Ren, Bo Zhang, Ruitao Xie

Trust in scientific research is diminished by evidence that data are being manipulated. Outcome switching, data dredging and selective publication are some of the problems that undermine the integrity of published research. Methods for using blockchain to provide proof of pre-specified endpoints in clinical trial protocols were first reported by Carlisle. We wished to empirically test such an approach using a clinical trial protocol where outcome switching has previously been reported. Here we confirm the use of blockchain as a low cost, independently verifiable method to audit and confirm the reliability of scientific studies

# 4) Best Treatment Identification for Disease Using Machine Learning Approach in Relation to Short Text

# AUTHORS: Bharti E. Nerkar, Sanjay S. Gharde

The goal of Machine Learning is to construct a computer system that can adapt and learn from their experience. Machine Learning approach helps to integrate the computer based system into the healthcare field in order to obtain best and accurate results for the system. Here the system deals with automatic identification of informative sentences from medical published by medical journals. Our main aim is to integrate machine learning in medical field and build an application that is capable of automatically identifying and disseminating disease and treatment related information, further it also identifies semantic relations that exists between diseases and treatments. In the proposed work user will search for the disease summary (disease and treatment related information) by giving symptoms as a query in the search engine. Initially when a pdf is downloaded and saved in the system it first performs per processing on the data in the document and the extracted relevant data is stored in the database. The symptoms entered by the user are further classified using SVM classifier to make the further process easier to find the semantic keyword which helps to identify the disease easily and quickly. Then the semantic keyword found is matched with the stored medical input database to identify the exact disease related to that keyword present. Once the disease related to the symptom is identified, it is sent to medical database to extract the articles pertaining to that disease. The preprocessing process involves tokenization, removal of stop words and stemming. Followed by that, relevant information is extracted using the keyword searching algorithm. The combination of BOW, NLP and biomedical concepts are put together toe identifying semantic relations that exist between diseases and treatments in biomedical sentences. Till now the best result obtain is 98.51% F-measure by OanaFrunza, for the extraction of cure and prevents relations. In our implementation of our proposed system we have used SVM classifier which gives us an improved result. The problem statement of the existing system was, it didn’t identify the best disease treatment. So the proposed solution used data mining concepts using voting algorithm to resolve the problem and find the best treatment for disease out of the treatment identified by the system.

**5)** **“Survey of e-Health Status and Services in Eastern India”, Far East Journal of Electronics and Communication**

**AUTHORS:**  **Subhranil Som, Rajashree Roy Som and Renuka Mahajan**

Telemedicine uses message and information technology to deliver health care when distance keeps the patients far from doctors. It plays a noteworthy title role to modernize the health care systems mainly in the developing countries. Telemedicine is popularly classified as tele-cardiology, tele-dermatology, tele-radiology, tele-ophthalmology, etc. based on the nature of medical services delivered in this manner. The Government of India has launched a number of projects to explore the feasibility of application of telemedicine to extend better health care services to the people in the rural and remote areas of the country. As a result, India is now leading the developing world in the installation and support of telemedicine services to remote regions through various types of telecom networks ranging from satellite to optical fiber to mobile.