**Topic Title:**

“Strength and Weaknesses in Blockchain Consensus Algorithms.”

**Description:**

This academic paper will be based on a technical analysis of popular blockchain consensus algorithms. The methodology for conducting my research will be done via academic and professional literature mostly based from the IEEE and ACM databases. Although some material might not currently be present in those databases, in which case I may get information from another credible source. This paper will begin to discuss pros and cons of popular and upcoming blockchain consensus algorithms. Examples of these would be the Proof of Work, Proof of Stake, Delegate Proof of Stake, Delegate Byzantine Fault Tolerance, and Transactions as a Proof of Stake algorithms. This is all contingent I find professional and academic references on each specific algorithm. In this discussion I will explain high and low level overviews of how these algorithms work along with when and where you would implement one. I will also discuss their vulnerabilities and security exploits if any are known. Out of the topics provided, I believe this one is most relevant to peer to peer communications because blockchain is essentially a peer to peer decentralized digital ledger and is fast growing invigorating technology.

**Structure:**

The structure will begin with a quick abstract and methodology.

It will then begin an introduction into what blockchain is along with a brief history.

I will then begin providing research starting with the PoW and the PoS algorithms.

The next algorithms are contingent on how much research I find on them.I will then give a conclusion of a high level over view of my findings and my personal opinions on the matter.

**References:**

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