Emerging Trends Research Plan

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# Problem Description

Lately the Technology Domain and especially the Software Development field of it was vastly invaded by new terms like Blockchain, Decentralization, Web3, etc. With the latest innovations that came along with the invention of cryptocurrency, it was determined that there is a more secure and progressive way of storing data than the classic ‘server’ option, which is a blockchain. A blockchain is similar to a database but instead of being run on a single machine it is split between all the nodes of the blockchain. The purpose of this research is to analyze the concept of the Blockchain, its principles, the pros and cons of using it as a an alternative to the ordinary data storing and the new iteration of the web, the Web3. I will take as my research phenomenon the innovative Proof of Stake blockchain TON(The Open Network).

# Research Question

Main Question:

How the proof of stake blockchain TON ensures a decentralized environment for developing web applications?

Sub Questions:

How is TON Blockchain architecture and what is innovative about it?

What is TonWeb and how it ensures decentralization?

# Research Framework and Methods

The purpose of this research is to immerse into the concept of decentralization and specifically the decentralization of World Wide Web. This research will help in better understanding the innovations that come with the Blockchain technology how it comes to replace the usual web-development principles and how it can be used in future implementations.

For the means of this research the DOT Framework strategies will be used with the following research Methods:

Library:

* Literature Study – analyze information, existing documentation and articles.
* SWOT analysis – determine the pros and cons of Web3 in comparison to Web2.

Field:

* + Document Analysis – analyze the documentation of the TON blockchain and the development kit provided by it.
  + Domain modelling – determine the domain that is most suitable for a decentralized web-application.

Workshop:

* Prototyping – develop a concept using the JavaScript SDK that will function on the TON Blockchain

Deliverables:

Research Report

Proof of Concept – if rentable

Estimated Required Time:

Research Report – 20 hours, Proof of Concept 20 hours