**Heterogeneous Social Network Location Aware Multi Party Data Protection and Privacy System**

**Abstract**

Social networks are large online communities that allow users to interact and share information. They can be used to connect with friends, family, or potential romantic partners, build a business, or even find a job. The evolution of social media has led to a trend of posting daily photos on online Social Network Platforms (SNPs). The privacy of online photos is often protected carefully by security mechanisms. However, these mechanisms will lose effectiveness when someone spreads the photos to other platforms. This project proposes a blockchain based secure photo sharing framework that provides powerful dissemination control for heterogeneous social network photo sharing. In contrast to security mechanisms running separately in centralized servers that do not trust each other, this framework achieves consistent consensus on photo dissemination control through carefully designed smart contract-based protocols. The proposed protocols to create platform-free dissemination trees for every image, providing users with complete sharing control and privacy protection. Considering the possible privacy conflicts between owners and subsequent re-posters in heterogeneous social network, this project design a dynamic privacy policy generation algorithm that maximizes the flexibility of re-posters without violating formers' privacy. Moreover, Photo privacy also provides robust photo ownership identification mechanisms to avoid illegal reprinting. It introduces a random noise black box in a two-stage separable deep learning process to improve robustness against unpredictable manipulations. Through extensive real-world simulations, the results demonstrate the capability and effectiveness of the framework across a number of performance metrics.

**Software Requirements**

* Server Side : Python 3.7.4(64-bit) or (32-bit)
* Client Side : HTML, CSS, Bootstrap
* IDE : IDLE, Flask 1.1.1
* Back end : MySQL 5.
* Server : Wampserver 2i
* DL Packages : TensorFlow, Pandas, SiKit Learn
* BC Packages : PyCryptodome