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To Introduce a Cloud Computing Environment based Security Model for Trap Suspected Person and Reducing Criminal Activities in Smart Cities

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Abstract: The model of a Smart city and its policy rules should harmonize the role of the city as a functional place of economic activities and exchange, and the role of the city as a cultural and social place of an urban way of life. The "Smart City" is a center for public and private local and global services on mostly local network and services infrastructures for various domains. in smart city all services and applications are focused public safety and security and services infrastructure, safety and quality of life to the city by minimizing crime, urban violence and terror threats. In this paper we are introducing a security model for securing peoples against crime. In this model we presented a cloud computing system of trapping suspected person[1].
Keywords: Smart City, Aadhar Identification, Cloud Computing Environment, Public Service Integration,

I. INTRODUCTION

Today you know that a big problem in various cities to searching a person who forget from us, who theft any items from us, who are criminal or who perform any unauthorized works in a organizations.

After sometime we know this person information. But we are unable to find his current or past working or present status about this accused person.

How we will be trap suspected persons? how we securing and aware peoples around specific area against human crimes? In this chapter we suggestion how solve above problems and how reducing this types of efforts through related analysis. We are using web based resources and developing a web cloud system for gathering data from people with his online complaints, control abnormal social efforts and trap suspected person. We are developing a system that present real crime reports, controlling messages, fast communication about suspected person's location and also generate real and live analysis ratios about crime or unsocial efforts in specific geographical place. After that we get speedily information's about how and where crime efforts will increase in analytical way. In smart cities, it is must to secure humans against crime efforts in based on ICT trends and tools.

II. LITERATURE OF REVIEW

1) P. Umesh, Dr. B. Snehlata (2018) in their paper entitled "An Idea to design a trapping system to enhance Security", introduced a cloud based security model for security purpose. This model is not only protecting humans against crime also trap suspected persons. For this he proposed a methodology that controls public services and if any suspected person will come in service center then enable issue demand service he will be produce his AADHAR identity. After Aadhar verification, If suspected person profile will match complaint data profile then his all details issue with massage to all users.

2) Pelumi E et al. (2018) in their paper entitled "Analysis of selected crime data in Nigeria" analysis of selected crime data in Nigeria. He analyzed different types of crime and find relationship between crime efforts.

3) Madan Lal et al. 2018 in their paper entitled "Study of Face Recognition Techniques: A Survey " Study of face recognition has remained a striving area for researchers for many years. In this paper, a comprehensive study was performed over different face recognition methods. After detailed analysis it revealed that PCA is best suited technique when dimension of features is higher for original face images, whereas Eigen faces image features method work well for frontal face recognition.

4) Maximilian Matthé et al. 2017 in their paper entitled "Comparison of photo-matching algorithms commonly used for photographic capture–recapture studies", This study presented a thorough analysis of matching performance of pixel-based and feature-based photo-matching algorithms for amphibian image databases. Even though this presentation was limited to amphibian databases, we believe the obtained results are generalizable to other taxa

5) Lacinák and Jozef et al. (2017) in their paper entitled "Smart city, Safety and Security", showed several ideas on how to define the concept of Smart City, including our own. However, his main focus is, that the integration of technology and natural environment increases the effectiveness of processes in the field of safety in order to reduce crime and terror threats, to allow its citizens life in healthy environment and simple access to healthcare, and to achieve readiness and quick response to threatening or arose emergencies.

6) Aomei Lia et al. (2017) in their paper entitled "An Improved FAST+SURF Fast Matching Algorithm", In this paper, he improved FAST feature point combined with SURF descriptor matching algorithm is proposed, which realizes the real-time matching of target. In order to they realize the fast matching of target extraction, using the Laplace operator on weighted FAST feature points to further optimize the feature point extraction will be strengthened, to give strong robustness SURF descriptors, in order to achieve the goal of fast matching.

7) Sathya G. et al. (2017) in their paper entitled "Bio Metric Authentication System Based on Aadhar Card" proposed the need of authentication voting system. In this paper he study current voting system drawbacks and requirements. Also introduced a new authentication secure voting model. In this model become solutions of previous system drawbacks. Person can vote through Aadhar identification. Enable his voting fingerprint scanner.

8) Masila Abdul Jalil et al. (2017) in their paper entitled "Knowledge Representation Model for Crime Analysis" study, a prototype called Crime Analysis is implemented based on a framework of ontological-based case matching mechanism. This prototype contains two main parts, the ontology model and the constructed case-matching engine. The ontology model needs to be constructed first to represent the classes and the relationship between the classes of the motorcycle theft information.

9) Joshi Sujata et al. (2016) in their entitled "Developing Smart Cities: An Integrated Framework" explores various aspects and dimensions of a smart city. To bridge the gap in literature regarding the concept of smart cities and its implementation, a framework has been developed to get better insights about the idea of smart city. On the basis of extensive and deep research of literature from diverse domains, we have identified six significant pillars for developing the framework as: Social, Management, Economic, Legal, Technology and Sustainability (SMELTS).

10) Rajneesh Tanwar et al. (2016) in their entitled "Railway Reservation Verification by Aadhar Card" proposed framework will increase the security at railway station and verification of passenger is done in very secured way that means each and every passenger travelling in train is verified plus checked. This will reduce fake travelers and also increase security at railway station so that risk for bomb blast or any terror attack will be finished. Implementation of this idea will also reduce the congestion or huge mass over the platform

11) Radovan Novotný et al. (2014) in their entitled "Smart City Concept, Applications and Services" This paper is a contribution to the understanding of smart city solutions and applications. In the introductory section there is a summary of the definitions and understanding of smart cities. It can be observed that the concept of a smart city is still somewhat unclear, definitions of a "smart city" vary broadly

12) Fedorov Vitalij et al. (2012) in their entitled "Safe City – an Open and Reliable Solution for a Safe and Smart City" introduced Safe City solution builds a comprehensive and intelligent view on safety in the smart city in a trusted way. It unifies and integrates various events and contextual information obtained from heterogeneous information systems into a single information space, by visualizing such information and opening it to other systems.

A. *Smart City Concept*

Nowadays, cities across the world are one by one trying to become so called Smart Cities. In this paper we propose several ideas on how to define the concept of other Smart City including our town. However, in this paper our main focus for discuss some methods of safety and security concern in smart cities in the future.

Safe City is a city, that by the integration of technology and natural environment increases the effectiveness of processes in the field of safety, in order to reduce crime and terror threats, to allow its citizens life in healthy environment and simple access to healthcare, and to achieve readiness and quick response to threatening or arose emergencies. Safe City system should include following features [5]:

1) Smart traffic systems and routes,
2) Smart safety systems for surveillance, search, detection and identification,
3) Smart systems of crisis management to support decision making, early warning, monitoring and forecasting,
4) Emergencies and environmental situation,
5) Centrally operated units of police and Integrated Rescue System (IRS)

B. Security Needs of Smart City

The model of a Smart city and its policy rules should harmonize the role of the city as a functional place of economic activities and exchange, and the role of the city as a cultural and social place of an urban way of life. The "Smart City" is a center for public and private local and global services on mostly local network and services infrastructures for various domains. The services and applications for public safety and security, running inside a common city network and services infrastructure, return security, safety and quality of life to the city by reducing crime, urban violence and terror threats on the one side and by quicker responding to emergency situations on the other. Unfortunately our society phases many challenges one of them is security related. A person who is kidnapped and it is not easy to search him. Similarly a person who is accused in any crime and he goes to anywhere without any fair. It is very difficult to search them in short duration.

C. Challenge's in Smart City

Unfortunately our society phases many challenges one of them is security related. A person who is kidnapped and it is not easy to search him. Similarly a person who is accused in any crime and he goes to anywhere without any fair. It is very difficult to search them in short duration. Sometime this type of events takes 3 to 4 years for searching the criminal. At many times high percentage of cases closed without any evidence or police are unable to arrest them [1].

Nowadays various types of crimes and problems are increasing in big cities; it is possible that they will be making a smart city. We have to must how we protect and trap suspected person who accused any event, we discuss in above. In below we discuss some unsocial event.

1) *Crimes Against Persons:* Murder, Aggravated Assault, Kidnapping/Abduction
2) *Crimes Against Property:* Arson, Criminal Mischief/Damaged Property, Fraud, Theft from Motor Vehicle and Stolen Property
3) *Crimes Against Society:* Drugs/Narcotics Violations, Weapon Law Violations
4) *All Other Offenses:* Fraud – NSF – Closed Account, Violation of a Restraining/Court Order

D. Security Concerned Through Aadhar Identification

Aadhar is a national identity project, but we believe that the subtle difference between identity verification and authentication is itself not well understood, and this leads to confusions in policy making and deployment. Below, we attempt to first demarcate the two concepts. According to standard notions of digital authentication, a security principal (a user or a computer), while requesting access to a service, must provide two independent pieces of information - identity and authentication. Whereas identity provides an answer to the question for authentication is a challenge-response process that provides a "proof of the claim of identity", typically using an authentication credential? Common examples of identity are User ID, cryptographic public keys, email ids, ATM or smart cards; some common authentication credentials are passwords, PINs and cryptographic private keys. Identity may be considered public information but an authentication credential must necessarily be private a secret that is known only to the user. Moreover, authentication must be a conscious process that requires active participation by a user, but not necessarily so for identity verification.

III. PROPOSED SYSTEM:

We know that web application is web based application software which is run and maintain into IIS server. Some proposed works mention in below. For the gathering data from people with their online complaints, control and criminal conveys.

Also we will provide related reports with analysis a specific area. Web enable application is develop including database and programming environments.

There are more databases are present which handle web based client server applications such as ORACLE, MY SQL or SQL SERVER is famous databases. These are eligible to work in concurrent environments.

For developing web enable applications software we can use JAVA or Microsoft VB.NET tools. A web based application program run in two sides which is client side and server side. In the client side all peoples who have rights to access this application can 24 hours access anyway. They can use also laptop, smart phones or tabs or others device. Also we can use data mining association rule technique to show related analysis report.

Below mention proposed block diagram of Online Trap and Resource Switching System as mention in below. Our work has two parts

We can describe our work in two categories: 1. Person trapping, 2. Analysis

A. Process Model

Under the cloud computing environment in this system for trapping suspected persons the work is performed as follows

1) Login user profile
2) Register online complaint
3) Admin After Verification of "Aadhar" identification of suspected person admin create suspected profile and approve for trap.
4) Admin send suspected profile to all service providers.
5) If suspected person request to some service in service place then if his profile match suspected person profile then his service will not issuing and also his all services are block immediately.
6) If services are block then related messages are send immediately to all types of users else issue service
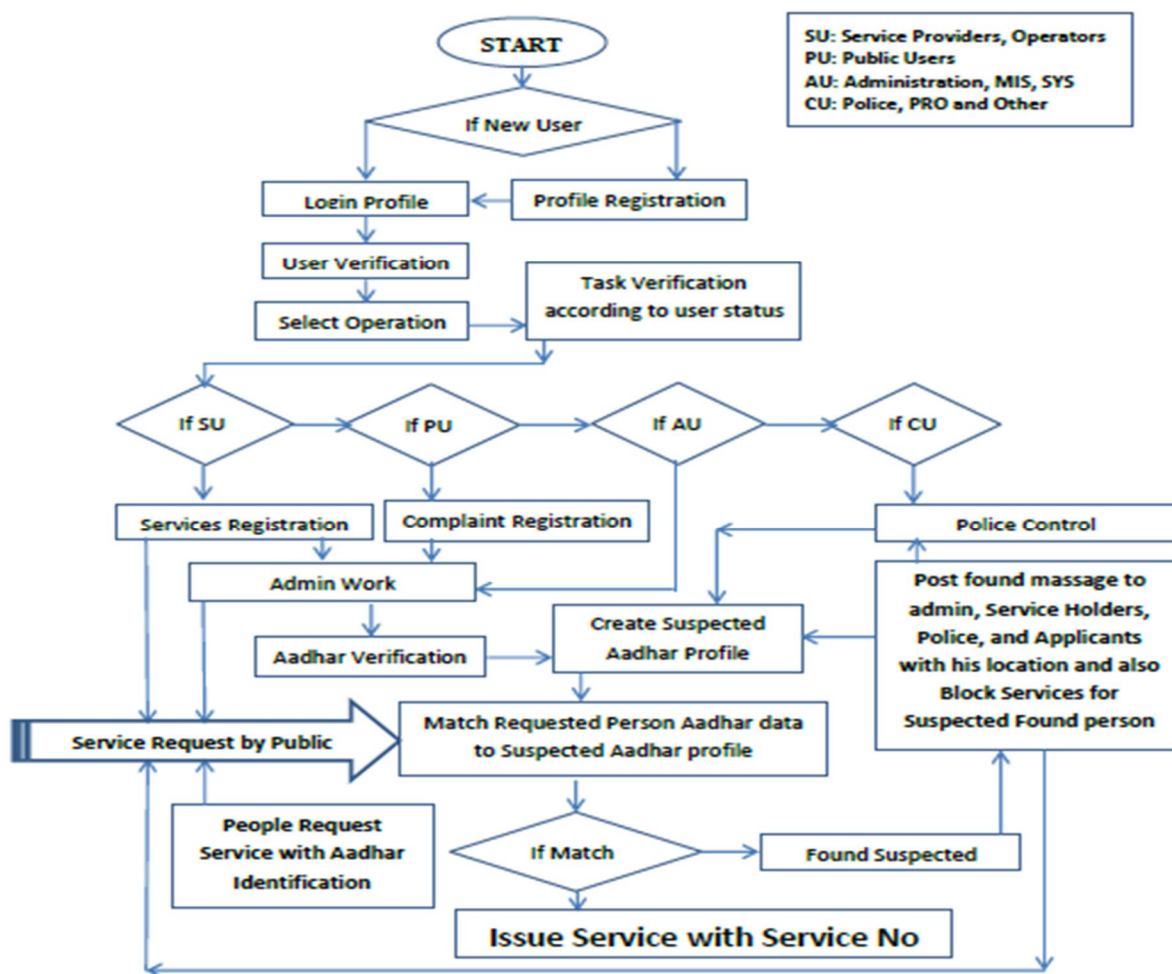
Flow Chart : Cloud Computing Environment for Human Security into Smart City

B. Basic Terms

1) Users Register his profile
2) Complaint Register with Cloud Environment
3) Aadhar Verification for suspected Person
4) Control Services.
5) Trap Suspected Persons in service point
6) Communication Between Users about suspected persons
7) Block Services
8) Analysis Various Complaints and his status

C. Future Scope

Nowadays, due to the development of many technologies, this system can be imagined to be properly arranged, nowadays there are many sensor techniques also from whom face mapping is also done, if we have the information related to the "Aadhar" identifications a person then it is possible to such a system can be developed so that any criminal registered in our web enabled application program can be put in face search mode. When a person move in front of CC TV camera then system will update information on servers and its current location related information also will be have been sending to nearest police station and other institutions.

A lot of research is being done on this subject. in various organizations is using Face mapping, eye mapping, finger print mapping for authentication purpose,

D. Limitation

This hypothesis can only work if we develop a cloud computing environment with which all services are connected like Aadhaar, voter identification, motor licenses and mobile services, banking. In future, we will look at a system in which service providers will need a service number to provide all services which will be similar to our hypothesis. In this paper, I am presenting the format of such a system through a flow chart that will control the services and can send its location and other information to the public on the service request of the public.

The only thing here is not that we know that suspected person, but we stop every service related to its base, this is the main point of research.

IV.   CONCLUSION

After study of some related research papers we find that if criminals working are online then we trace by using some mobile techniques. But it is more complicated and generally unsuccessful. Because criminals are expert and time to time change his mobile or change his SIM card. If our system will successfully implemented then we would easily trap and control criminals, find out types of crimes which is mostly increased in an area of smart city, specify the location where the criminal belong, calculate the percentage of crime increased in a specific area, create Secure and reliable environment for people, create a psychological environment for Criminals, in future If criminals involve in illegal work then it is possible that related services will be block because they are linked to "AADHAR" no.

REFERENCES

[1] P. Umesh, Dr. B. Snehlata (2018), An Idea to design a trapping system to enhance Security, i-manager's Journal on Pattern Recognition, Vol. 5 No.1 (10-14). 1- March - May 2018.

[2] Pelumi E. Oguntunde, Oluwadare O. Ojo, Hilary I. O kagbue, Omoleye A. Oguntunde (2018), Analysis of selected crime data in Nigeria, Contents lists available at www.Science Direct.com, Data in Brief, 19 (2018)1242–1249.

[3] Madan Lal, Kamlesh Kumar, Sindh Madressatul Islam, Rafaqat Hussain Arain, Abdullah Maitlo, Sadaquat Ali Ruk, Hidayatullah Shaikh, (2018), "Study of Face Recognition Techniques: A Survey", *(IJACSA) International Journal of Advanced Computer Science and Applications, Vol. 9, No. 6, 2018* 42

[4] Matthé M, Sannolo M, Winiarski K, et al. (2017) ,"Comparison of photograph-matching algorithms commonly used for photographic capture–recapture studies", *Ecol Evol*. 2017;7:5861–5872. https://doi.org/10.1002/ece3.3140

[5] Maroš Lacinák, Jozef Ristvej (2017), Smart city, Safety and Security, TRANSCOM 2017: International scientific conference on sustainable, modern and safe transport, Available online at www.sciencedirect.com, Procedia Engineering 192 (2017) 522 – 527.

[6] Aomei Lia,Wanli Jiang,Weihua Yuan,Dehui Daia,Siyu Zhang ,Zhe Wei(2017), "An Improved FAST+SURF Fast Matching Algorithm", International Congress of Information and Communication Technology (ICICT 2017), Procedia Computer Science 107 (2017) 306 – 312

[7] Sathya. G, Jeevananthanam. C, Sangeetha. K, Venmathi.V, Ramya.P (2017), Bio Metric Authentication System Based on Aadhar Card, International journal of Pure and Applied Mathematics, Valume 117 no 9 2017, 7-11.

[8] Masila Abdul Jalil, Chia Pui Ling, Noor Maizura Mohamad Noor, Fatihah Mohd (2017), Knowledge Representation Model for Crime Analysis, 2nd International Conference on Computer Science and Computational Intelligence 2017, Procedia Computer Science 116 (2017) 484–491.

[9] Joshi Sujata, Saxena Saksham, Godbole Tanvi, Shreya (2016), Developing Smart Cities: An Integrated Framework, 6th International Conference on Advances on Computing & Communications, ICACC 2016, 6-8 September 2016, Cochin, India , Procedia Computer Science 93 (2016) 902 – 909.

[10] Rajneesh Tanwar, Ahmad Khalid Nazari, Vikas Deep, Naveen Garg (2016), Railway Reservation Verification by Aadhar Card, International Conference on Computational Modeling and Security (CMS 2016), Procedia Computer Science 85 (2016) 970 – 975.

[11] Radovan Novotný, Radek Kuchta, Jaroslav Kadlec (2014), Smart City Concept, Applications and Services, Journal of Telecommunication's System & Management, Volume 3 • Issue 2 • 1000117

[12] Fedorov Vitalij, Ana Robnik, Terekhov Alexey (2012), Safe City – an Open and Reliable Solution for a Safe and Smart City, ELEKTROTEHNIŠKI VESTNIK 79(5): 262-267, 2012.

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