

(54) Title of the invention : A SYSTEM FOR DETECTION AND RECTIFICATION OF DISTORTED FINGERPRINTS

(51) International classification :G01S 5/02
 (86) International Application No :PCT//
 Filing Date :01/01/1900
 (87) International Publication No :NA
 (61) Patent of Addition to Application Number :NA
 Filing Date :NA
 (62) Divisional to Application Number :NA
 Filing Date :NA

(71)Name of Applicant :

1)Dr.R.RameshKumar

Address of Applicant :Professor, Department Of Computer Science and Engineering ,
 Sphoorthy Engineering College, Naderugul (V), Balapur (Mandal), Ranga Reddy (Dist),
 Telangana-501510, India -----

2)Dr.Jalumuri Anitha**3)Karthik Kovuri****4)Mr.Thotakura Veeranna****5)Dr.D.William Albert****6)Dr.Nara Sreekanth****7)Mr. Uddagiri ChandraSekhar**

Name of Applicant : NA

Address of Applicant : NA

(72)Name of Inventor :

1)Dr.R.RameshKumar

Address of Applicant :Professor, Department Of Computer Science and Engineering ,
 Sphoorthy Engineering College, Naderugul (V), Balapur (Mandal), Ranga Reddy (Dist),
 Telangana-501510, India -----

2)Dr.Jalumuri Anitha

Address of Applicant :Associate Professor, Department Of Computer Science and Engineering
 , Malla Reddy Engineering College, (Autonomous), MaisammaGuda, Secunderabad-500100,
 Telangana, India -----

3)Karthik Kovuri

Address of Applicant :Associate Dean, Academics, B V Raju Institute of Technology
 Narsapur-502313, Medak District, Telangana, India -----

4)Mr.Thotakura Veeranna

Address of Applicant :Associate Professor, Department Of Computer Science and
 Engineering, Sai Spurthi Institute Of Technology, B.Gangaram(V), Sathupalli(M), Khammam
 Dist., Telangana-507303, India -----

5)Dr.D.William Albert

Address of Applicant :Professor, Department Of Computer Science and Engineering, Ashoka
 Women's Engineering College, Dupadu, Kurnool, Andhra pradesh-518002, India -----

6)Dr.Nara Sreekanth

Address of Applicant :Associate Professor, Department Of Computer Science and Engineering
 , BVRIT Hyderabad College of Engineering For Women, Nizampet Road, Hyderabad,
 Telangana-500090, India -----

7)Mr. Uddagiri ChandraSekhar

Address of Applicant :Associate Professor, Department Of Computer Science and
 Engineering, BVRIT Hyderabad College of Engineering For Women, Nizampet Road,
 Hyderabad, Telangana-500090, India -----

(57) Abstract :

Fingerprints, as part of biometrics, play crucial role in unique identification of humans across the globe. It is essential to detect fingerprints accurately. However, it is indispensable for biometrics based identity detection systems to deal with distorted fingerprints as well. For genuine cases, it is important to rectify distorted fingerprints. The current invention is aimed at having a framework for detection and rectification of distorted fingerprints. It is cloud-assisted approach that makes the system scalable and available. The system has three important modules. First module is named as fingerprint registration module that captures fingerprint of humans, enhance them using SIFT analysis, extract minutiae, generate minutiae table and save it to fingerprint database. The second module is known as fingerprint verification module which takes care of uniquely identifying humans. It captures live fingerprint, matches with fingerprints in the database to accept or reject it based on the purpose of an application for which fingerprint is given by customer. In case of any distorted fingerprint, for whatever reason, the third module takes care of finding its genuineness and performs rectification of fingerprint so as to allow smooth functioning in future. The invention is realized using deep learning and image processing. The current invention has many stakeholders who are immensely benefited. They include government organizations dealing with unique identification of citizens, banks, insurance companies, crime and criminal investigation departments, general public, researchers and academia.

No. of Pages : 15 No. of Claims : 7