

Offline Signature Verification Approaches: A Review

Anu GAUR, Minakshi BHARDWAJ

UIIT, HP University, Shimla, India

anu_hpu@yahoo.in, minni2110@gmail.com

Abstract

Signatures are the most common medium for establishing identity and validation of a person's credentials. However not everybody has the same signatures although similarity may exist. So it becomes very important to try and prove the authenticity of signatures based on their functional and behavioral property. However signatures are prone to being copied and recently the world has been witnessing a rise in spurious signatures hence an efficient signature verification system is the need of the hour. Although similar papers and lots of research has gone on in this field here we simply propose an off line verification system review based on analysis of signatures.

Index terms: signature, biometric, neural networks, off-line signature verification

References:

- [1]. K. Bowyer, V. Govindaraju, N. Ratha, Introduction to the special issue on recent advances in biometric systems, IEEE Transactions on Systems, Man and Cybernetics - B 37(5)(2007)1091–1095.
- [2]. D. Zhang, J. Campbell, D. Maltoni, R. Bolle, Special issue on biometric systems, IEEE Transactions on Systems, Man and Cybernetics - C 35(3)(2005)273–275.
- [3]. S. Prabhakar, J. Kittler, D. Maltoni, L. O’Gorman, T. Tan, Introduction to the special issue on biometrics: progress and directions, PAMI29(4)(2007)513–516.
- [4]. S. Liu, M. Silverman, A practical guide to biometric security technology, IEEE IT Professional 3 (1) (2001) 27–32.
- [5]. K. Franke, J. Ruiz-del-Solar, M. Köppen, Soft-Biometrics: Soft-Computing for Biometric-Applications, Tech. Rep. IPK, 2003.
- [6]. S. Impedovo, G. Pirlo, Verification of hand written signatures: an overview, in: ICIAP ’07: Proceedings of the 14th International Conference on Image.
- [7]. R. Plamondon, in: Progress in Automatic Signature Verification, World Scientific publications, 1994.
- [8]. M. Fairhurst, New perspectives in automatic signature verification, Tech.Rep. 1, Information Security Technical Report, 1998.
- [9]. Batista, L., Rivard D., Sabourin R., Granger E., Maupin P. 2007. State of the art in off-line signature verification. In: Verma B., Blumenstein M. (eds.), Pattern

- Recognition Technologies and Applications: Recent Advances, (1e). IGI Global, Hershey (2007)
- [10]. Madasu V K and Lovell B. C. 2007. An Automatic Off-Line Signature Verification and Forgery Detection System. In: Verma, B., Blumenstein, M. (eds.) Pattern Recognition Technologies and Applications: Recent Advances, 1st ed. IGI Global, Hershey (2007)
- [11]. Kiani V, Pourreza R and Pourreza H R. 2009. Offline Signature Verification Using Local Radon Transform and SVM. International Journal of Image Processing (IJIP) Volume(3), Issue(5), (pp 184 – 194)
- [12]. Batista, L., Rivard D., Sabourin R., Granger E., Maupin P. 2007. State of the art in off-line signature verification. In: Verma B., Blumenstein M. (eds.), Pattern Recognition Technologies and Applications: Recent Advances, (1e). IGI Global, Hershey (2007).
- [13]. Yazan M. Al-Omari, Siti Norul Huda Sheikh Abdullah and Khairuddin Omar. 2011. State of the art Offline signature verification system. IEEE International Conference on Pattern Analysis and Intelligent Robotics 28-29 June 2011, Putrajaya, Malaysia
- [14]. Arya M S and Inamdar V S. (2010). A Preliminary Study on Various Off-line Hand Written Signature Verification Approaches. 2010 International Journal of Computer Applications. Volume 1, No. 9 (pp 0975 – 8887)
- [15]. Debasish Jena, Banshidhar Majhi, Saroj Kumar Panigrahy, Sanjay Kumar Jena(2008)Improved Offline Signature Verification Scheme Using Feature Point Extraction Method
- [16]. Vu Nguyen, Michael Blumenstein, Graham Leedham(2009) Global Features for the Off-Line Signature Verification Problem
- [17]. Jesus F. Vargas, Miguel A. Ferrer, Carlos M. Travieso, Jesus B. Alonso(2009) Offline Signature Verification Based on Pseudo-Cepstral Coefficients
- [18]. RamachandraA C, Jyothi Srinivasa Rao,K BRaja,KRVenugopla,L M Patnaik(2009)Robust Offline Signature Verification Based OnGlobal Features.
- [19]. Bradley Schafer,serestina viriri (2009) an offline signature verification system
- [20]. Sanjay N. Gunjal, Manoj Lipton (2011) Robust Offline Signature Verification Based on Polygon Matching Technique
- [21]. M.S. Shirdhonkar and Manesh Kokare (2011) Off-Line Handwritten Signature Identification Using Rotated Complex Wavelet Filters
- [22]. J.F. Vargas b,n, M.A.Ferrer a, C.M.Travieso a, J.B.Alonso a (2011) Off-line signature verification based on grey level information using texture features
- [23]. Ashwini Pansare, Shalini Bhatia(2012) Handwritten Signature Verification using Neural Network
- [24]. Md. Asraful Haque, Tofik Ali(2012) Improved Offline Signature Verification Method Using Parallel Block Analysis

- [25]. Shiwani Sthapak, Minal Khopade, Chetana Kashid Artificial(2013) Neural Network Based Signature Recognition & Verification
- [26]. Indrajit Bhattacharyaa, Prabir Ghoshb, Swarup Biswasb(2013) Offline Signature Verification Using Pixel Matching Technique
- [27]. Anu Gaur ,garima joshi,sheenu gupta(2015) Hand-written Word Recognition using Fusion of Shape Based Features
- [28]. Ms.RajpalKaur,Ms.Pooja Choudhary(2015) Handwritten Signature Verification Based on Surf Features using HMM