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APPENDIX-I (Database Collection Form)

WRITER NUMBER: _____

DATABASE			
(HANDWRITTEN DEVANAGARI WORDS)			
Research Scholar: SUKHINDER SINGH, ECED, GZSCCET, MRSPTU, BATHINDA			
Supervisor: Prof. (Dr.) NARESH K. GARG, PROFESSOR, ECED, GZSCCET, MRSPTU, BATHINDA			
NAME OF WRITER <small>(Full Name as per 10th DMCI)</small>		AGE <small>(in Years)</small>	
EDUCATION <small>(12th / Diploma / Graduation / Post Graduation/PGCI)</small>		SEX <small>(Male/ Female)</small>	
PROFESSION <small>(Student/Business Man/ Housewife/ Professional)</small>			
Note: Please replicate each Devanagari word in his/her natural language (WITHIN THE BOX ONLY)			
आसनसोल		मेरठ	
औरंगाबाद		ऊटी	
कांकीनाडा		झरिया	
कपूरथला		अहमदाबाद	
खजुराहो		महेशतला	
ऋषिकेश		एलौरा	
नैनीताल		लक्षमनपुर	
चौंसी		इटवा	
त्रिवेणी		राणाघाट	
वाराणसी		साहिबगंज	
हुगली		अंडमान	
मैसूर		भरतपुर	
छपरा		हावड़ा	

Database (Handwritten Devanagari Words) as Collected by SUKHINDER SINGH Page 1 of 4

WRITER NUMBER: _____

Note: Please replicate each Devanagari word in his/her natural language (WITHIN THE BOX ONLY)			
जोधपुर		काकूरगाछी	
पानागढ़		देवघर	
विजयवाड़ा		चित्रकूट	
क्षेत्रपतीनगर		कोचीन	
फरिदाबाद		चंदौसी	
डेहरीओनसोन		तंजौर	
गिरिडीह		फिरोजाबाद	
एटा		पीलीभीत	
उलबेड़िया		मुर्षा	
डानकुनी		सिरोही	
सेवड़ाफुलि		अमृतसर	
धाने		ज्ञानपुर	
वैशाली		खिदीरपुर	
देहरादून		गुरवायुर	
लुधियाना		गोमो	
पोरबंदर		डिगबोई	
तिसतातोरसा		चिदंबरम	
विराटि		झुमरीतलैया	

Database (Handwritten Devanagari Words) as Collected by SUKHINDER SINGH Page 2 of 4

WRITER NUMBER: _____

Note: Please replicate each Devanagari word in his/her natural language (WITHIN THE BOX ONLY)			
मयिलादुतुरै		तिरुचिचरापल्ली	
मुर्तजापुर		नेल्लोर	
बनमंखी		न्युफरक्का	
मडलाफोर्ट		बक्सर	
चित्रदुर्ग		बख्तियारपुर	
पंजाब		वर्द्धमान	
खुरदारोड		बेंगलूरु	
भोपाल		मुंबई	
भिलाई		रक्सौल	
ढोलपुर		हरिद्वार	
ठनकपुर		समस्तीपुर	
धौलपुर		दिल्ली	
अयोध्या		दार्जिलिंग	
उज्जैन		स्वालियर	
कन्याकुमारी		मुजफ्फरपुर	
कृष्णनगर		चेन्नई	
चित्तरंजन		राजेन्द्रनगर	
जम्मूतवी		ईस्लामपुर	

Database (Handwritten Devanagari Words) as Collected by SUKHINDER SINGH Page 3 of 4

WRITER NUMBER: _____

Note: Please replicate each Devanagari word in his/her natural language (WITHIN THE BOX ONLY)			
भुवनेश्वर		जम्मू	
नवद्वीप		कश्मीर	
आंध्रप्रदेश		झारखंड	
अरुणाचल		कर्नाटक	
असम		केरल	
बिहार		महाराष्ट्र	
छत्तीसगढ़		मणिपुर	
गोआ		मेघालय	
गुजरात		मिजोरम	
हरियाणा		नागालैंड	
हिमाचल		राजस्थान	

I willingly agreed to participate as a writer to generate a corpus of handwritten Devanagari words for experimental/research work. I have no objection, if Research Scholar uses my handwritten Devanagari words (This database) for carrying out his/her future research. मैं स्वयंसेवा से प्रयोग/अनुसंधान कार्य के लिए हस्तलिखित देवनागरी शब्दों के एक कॉर्पस उत्पन्न करने के लिए एक लेखक के रूप में भाग लेने के लिए तैयार हूँ। अगर कोई शोध विद्वान अपने अभिनव के शोध को पूरा करने के लिए मेरे हस्तलिखित देवनागरी शब्द (यह डेटाबेस) का उपयोग करता है तो मुझे कोई आपत्ति नहीं है।

ADDRESS OF WRITER/PARTICIPANT

(Signature of Writer/Participant)

MOBILE NO. _____

E-MAIL ID _____

Database (Handwritten Devanagari Words) as Collected by SUKHINDER SINGH

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LIST OF RELATED PUBLICATIONS

Research Articles in SCIE/Scopus Indexed Journals:

- [1] **Singh, S.**, Garg, N.K. and Kumar, M.: Feature extraction and classification techniques for handwritten Devanagari text recognition: a survey. *Multimedia Tools and Applications*, 82:747-775 (2023). **(SCIE Indexed) [IF: 3.6]**

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- [2] **Singh, S.**, Garg, N.K. and Kumar, M.: On the performance analysis of various features and classifiers for handwritten Devanagari word recognition. *Neural Computing and Applications*, 35:7509-7527 (2023). **(SCIE Indexed) [IF: 6.0]**

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- [3] **Singh, S.** and Garg, N.K.: On studying handwritten Devanagari word recognition system based on gradient and structural features. *Journal of Northeastern University*, 25(4): 1332-1347, (2022). **(SCOPUS Indexed)**

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Research Articles in Conferences Proceedings/Book Chapters:

- [4] **Singh, S.** and Garg, N.K.: Review of optical Devanagari character recognition techniques. In: Satapathy S., Bhateja V., Janakiramaiah B., Chen YW. (eds) *Intelligent System Design. Advances in Intelligent Systems and Computing*, vol 1171. Springer, Singapore (2021). **(SCOPUS Indexed)**

https://link.springer.com/chapter/10.1007/978-981-15-5400-1_11

Paper Presented at: International Conference on Soft Computing and Signal Processing (ICSCSP-2019) held at Malla Reddy College College of Engineering & Technology, Maisammaguda, Dhulapally, Kompally, Medchal, Hyderabad-500100, Telangana (India) on 21st-22nd June, 2019.

- [5] **Singh, S.** and Garg, N.K.: Performance analysis of thinning algorithms for offline-handwritten Devanagari words. In: Sengodan, T., Murugappan, M., Misra, S. (eds) Advances in Electrical and Computer Technologies. Lecture Notes in Electrical Engineering, vol 881. Springer, Singapore (2022). **(SCOPUS INDEXED)**

https://link.springer.com/chapter/10.1007/978-981-19-1111-8_34

Paper Presented at: International Conference on Advances in Electrical and Computer Technologies (ICAECT-2021) held at PSR Engineering College, Sevalpatti, Sivakasi- 626140, Tamil Nadu (India) on 29th-30th Oct., 2021.

- [6] **Singh, S.** and Garg, N.K.: Optical Devanagari character recognition techniques for postal automation: a review. In: IEEE Proceedings of the International Conference on Intelligent Computing and Control Systems (ICICCS), pp. 1385-1389, (2019).

Paper Presented at: International Conference on Intelligent Computing and Control Systems (ICICCS-2019) held at Vaigai College of Engineering, Vinayapuram, Therkutheru, Madurai-625122, Tamil Nadu (India) on 15th-17th May, 2019.

Research Articles-Communicated:

- [7] **Singh, S.,** Garg, N.K. and Kumar, M.: VGG16: an efficient approach for offline handwritten Devanagari word recognition using deep features. **(Communicated in SCIE/Scopus Indexed Journal).**
- [8] **Singh, S.,** Garg, N.K. and Kumar, M.: Offline handwritten Devanagari word recognition using adaptive boosting approach. **(Communicated in SCIE/Scopus Indexed Journal).**
- [9] **Singh, S.,** Garg, N.K. and Kumar, M.: Recognition of offline handwritten Devanagari words: analytical study of different combinations of features and classifiers. **(Communicated in SCIE/Scopus Indexed Journal).**

LIST OF STTP/FDP/SEMINARS/TALKS/WEBINARS

Short Term Training/Faculty Development Programmes - Attended:

- [1] Participated in the Online Faculty Development Programme (FDP) on “**Machine Learning and Applications**” Organized by Department of Computer Science and Engineering, Sagar Institute of Research & Technology, Bhopal (Madhya Pradesh) during 18th-23rd May, 2020 (**One Week**).
- [2] Participated in the Faculty Development Programme (FDP) on “**Machine Learning and Data Science for Engineering Applications**”, Organized by Department of CSE & IT, Shadan College of Engineering and Technology, Hyderabad (Telangana) during 5th-10th June, 2020 (**One Week**).
- [3] Participated in the Online Faculty Development Programme (FDP) on “**Emerging Trends in Engineering & Technology**” Organized by Department of Electronics & Communication Engineering in collaboration with Department of Textile Engineering, GZSCCET-MRSPTU, Bathinda (Punjab) during 6th-10th July, 2020 (**One Week**).
- [4] Participated in the Virtual Faculty Development Programme (FDP) on “**Challenges and Opportunities in AI and ML**” Organized by Departments of Computer Science & Engineering, Master of Computer Applications and Artificial Intelligence & Machine Learning, Bheemanna Khandre Institute of Technology, Bhalki (Karnataka) during 20th-24th July, 2020 (**One Week**).
- [5] Participated in the Online Faculty Development Programme (FDP) on “**Pedagogical Techniques in Electronics and Electrical Engineering**” Sponsored by TEQIP-III and Organized by Department of Electronics Engineering, Walchand College of Engineering, Sangli (Maharashtra) during 10th-14th August, 2020 (**One Week**).
- [6] Participated in the AICTE & MRSPTU approved Online Short Term Training Programme (STTP) on “**Python Programming**” Organized by Department of Computer Science & Engineering, GZSCCET-MRSPTU, Bathinda (Punjab) during 15th-20th March, 2021 (**One Week**).

- [7] Participated in the Online Faculty Development Programme (FDP) on **“Python for Engineers”** Sponsored by IETE, organized by Department of Electronics and Communication Engineering, Vimal Jyothi Engineering College, Kannur (Kerala) during 26th-30th April 2021 **(One Week)**.
- [8] Participated in the Online AICTE Recognized Faculty Development Programme (FDP) on **“Machine Learning using Python”** Conducted by Computer Science and Engineering Department, NITTTR, Chandigarh during 25th-29th October, 2021 **(One Week)**.
- [9] Participated in the AICTE-ISTE approved Orientation/Refresher Programme on **“Artificial Intelligence and Machine Learning using Python”** Organized by Govt. Engineering College, Bikaner (Rajasthan) during 6th-11th December, 2021 **(One Week)**.
- [10] Participated in the Virtual Faculty Development Programme (FDP) on **“Stepstones to Prepare Successful Research Proposal and Publishing Research Articles in High Impact Journals”** Organized by the Department of Information Technology, in association with Academic Staff College, Dr. M.G.B. Educational and Research Institute, Chennai (Tamil Nadu) during 14th-18th December, 2021 **(One Week)**.
- [11] Participated in the Online Faculty Development Programme (FDP) on **“Machine Learning Fundamentals”** Organized by Department of Computer Science & IT, Kathua Campus, University of Jammu (J&K) during 23rd - 28th March, 2022 **(One Week)**.
- [12] Participated in the Online Faculty Development Programme (FDP) on **“Machine Learning: Concepts and Applications”** Organized by Department of Computer Science & IT, Kathua Campus, University of Jammu (J&K) during 14th-20th, March, 2023 **(One Week)**.

International Talks/Webinars - Attended:

- [13] Participated in the International SAGE TALK on **“How to Write a Research Paper”** by Dr R. Venkateswaran, Senior Vice President, Persistent Systems

Ltd., Pune, Organized by Department of Computer Science and Engineering, Sagar Institute of Research & Technology, Bhopal (Madhya Pradesh) dated on 16th June 2020 **(One Day)**.

- [14] Participated in the International SAGE TALK on “**Emerging Areas in Industrial IoT, Automotive IoT, and AIoT (AI in IoT)**” by Dr Raj Kamal, Former Vice Chancellor, DAVV Indore, Organized by Department of Computer Science and Engineering, Sagar Institute of Research & Technology, Bhopal (Madhya Pradesh) dated on 20th June 2020 **(One Day)**.
- [15] Participated in the International SAGE TALK on “**Advanced Deep Learning Approach for Natural Language Processing**” by Bui Thanh Hung, Engineering Technology Faculty, TDMU, Vietnam, Organized by Department of Computer Science and Engineering, Sagar Institute of Research & Technology, Bhopal (Madhya Pradesh) dated on 18th July 2020 **(One Day)**.
- [16] Participated in the webinar on “**Natural Language Processing using Unstructured Data-A Machine Learning Approach**” Conducted by The Federal Academy For Cyber Education, Vyttila Ernakulam (Kerala) dated on 20th September, 2020 **(One Day)**.