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RESEARCH OUTPUT OF ECR/2017/001056 Grant titled "A Framework for Deep Learning based Analytics for Intelligent Healthcare Applications" [2017-2020]

Papers published in SCI/SCIE/Web of Science/Scopus Indexed International Journals

1. Tushaar Gangavarapu, Gokul S Krishnan, **Sowmya Kamath S** and Jayakumar Jeganathan, "[FarSight: Long-Term Disease Prediction Using Unstructured Clinical Nursing Notes](#)", IEEE Transactions on Emerging Topics in Computing, Special issue on New Frontiers in Computing for Next-Generation Healthcare Systems, , ISSN: 2168-6750, 2020 [SCI, IF: 6.043] (*online*)
2. Tushaar Gangavarapu, Aditya Jayasimha, Gokul S Krishnan and **Sowmya Kamath S**, "[Predicting ICD-9 Code Groups with Fuzzy Similarity based Supervised Multi-Label Classification of Unstructured Clinical Nursing Notes](#)", Knowledge Based Systems, Elsevier, ISSN: 1532-0464, 2019 [SCI, IF: 5.921] (*online*)
3. Gokul S Krishnan and **Sowmya Kamath S**, "[A Novel GA-ELM Model for Patient-specific Mortality Prediction over Large-scale Lab Event Data](#)", Applied Soft Computing, Elsevier, Vol 80, pp 525-533, ISSN: 1568-4946, 2019, DOI: [10.1016/j.asoc.2019.04.019](#) [SCI, IF: 5.472] (*online*)
4. Gokul S Krishnan and **Sowmya Kamath S**, "[Ontology-driven Text Feature Modeling for Disease Prediction using Unstructured Radiological Notes](#)", Computación y Sistemas (CyS), ISSN 2007-9737, print ISSN 1405-5546, DOI: [10.13053/CyS-23-3-3238](#) [ESCI & Scopus, IF: 0.620] (*online*)
5. Karthik K and **Sowmya Kamath S**, "A Deep Neural Network Model for Content-Based Medical Image Retrieval with Multi-View Classification", The Visual Computer - International Journal of Computer Graphics - Springer, ISSN:1432-2315 [SCIE, IF: 1.415] (*In press*)
6. Karthik K and **Sowmya Kamath S**, "Swarm Optimization Based Bag of Visual Words Model for Content-Based X-Ray Scan Retrieval", International Journal of Biomedical Engineering and Technology (IJBET), Inderscience., ISSN:1752-6426, 2020 (ESCI & Scopus, IF: 0.57, CiteScore: 1.0) (*In press*)
7. Aditya Jayasimha, Rahul M, Pavan P, **Sowmya Kamath S**, "Nature-inspired Query Optimization Models for Medical Information Retrieval with Relevance Feedback", International Journal of Advanced Intelligence Paradigms, Inderscience Publishers, ISSN 1755-0394 (Scopus, CiteScore: 0.8) (*In press*)

Book Chapters published

1. Tushaar Gangavarapu, Aditya Jayasimha, Gokul S Krishnan and **Sowmya Kamath S**. (2019), [TAGS: Towards Automated Classification of Unstructured Clinical Nursing Notes](#). In: Métails E., Meziane F., Vadera, S. (eds) Natural Language Processing and Information Systems. NLDB 2019. Lecture Notes in Computer Science, Springer, Cham [online]
2. Krishnan G.S., **Sowmya Kamath S**. (2019) [A Supervised Approach for Patient-Specific ICU Mortality Prediction Using Feature Modeling](#). In: Hung J., Yen N., Hui L. (eds) Frontier Computing. FC 2018. Lecture Notes in Electrical Engineering, vol 542. Springer, Singapore (DOI: [10.1007/978-981-13-3648-5_32](#)) [online]

3. Krishnan G.S., **Sowmya Kamath S.** (2018) [A Supervised Learning Approach for ICU Mortality Prediction Based on Unstructured Electrocardiogram Text Reports](#). In: Silberstein M., Atigui F., Kornysheva E., Métais E., Meziane F. (eds) Natural Language Processing and Information Systems. NLDB 2018. Lecture Notes in Computer Science, vol 10859. Springer, Cham, DOI: 10.1007/978-3-319-91947-8_13 [online]

Refereed Conference Research Papers CORE ranked/Scopus Indexed (Total - 19)

1. Gokul S Krishnan and **Sowmya Kamath S**, "[Hybrid Text Feature Modeling for Disease Group Prediction using Unstructured Physicians' Notes](#)", 20th International Conference on Computational Science (ICCS 2020), Amsterdam, The Netherlands, June 3-5, 2020 [CORE 'A' ranked]
2. Suyash Ghuge, Nishant Kumar, Tilak Shenoy and **Sowmya Kamath S**, "Deep Neural Network Models for Detection of Arrhythmia based on Electrocardiogram Reports", 11th International Conference on Computing Communication and Networking Technologies, July 1-3, 2020, IIT Kharagpur [Scopus]
3. Karthik K and **Sowmya Kamath S**, "Improving Clinical Diagnosis Performance with Automated X-ray Scan Quality Enhancement Algorithms", International Conference on Advances in Systems, Control and Computing (AISCC-2020), Malaviya National Institute of Technology, Jaipur (MNIT Jaipur), February 27-28, 2020. [Scopus]
4. Nachiketh N, Ashwin Nayak and **Sowmya Kamath S**, "Leveraging Deep Learning Approaches for Patient Case Similarity Evaluation", 8th International Conference on Frontiers of Intelligent Computing: Theory and Applications (FICTA 2020), NITK Surathkal, Jan 4-5, 2020 [Scopus] **[Awarded Best paper]**
5. Selvan Sunitha Ravi, Anumeha Agrawal, Rosa Anil George and **Sowmya Kamath S**, "Benchmarking Semantic, Centroid and Graph based approaches for Medical Multi-document Summarization", 8th International Conference on Frontiers of Intelligent Computing: Theory and Applications (FICTA 2020), NITK Surathkal, Jan 4-5, 2020 [Scopus]
6. Aditya Jayasimha, Tushaar Gangavarapu, **Sowmya Kamath S** and Gokul S Krishnan, "[Deep Neural Learning for Automated Diagnostic Code Group Prediction using Unstructured Nursing Notes](#)", ACM India Joint International Conference on Data Science & Management of Data 7th ACM IKDD CoDS and 25th COMAD, ISB Hyderabad, 5-7 January 2020 [Core 'A' ranked]
7. Tushaar Gangavarapu, Gokul S Krishnan and **Sowmya Kamath S**, "[Coherence-based Modeling of Clinical Concepts Inferred from Heterogeneous Clinical Notes for ICU Patient Risk Stratification](#)", In the proceedings of SIGNLL Conference on Computational Natural Language Learning (CoNLL), 2019 Conference on Empirical Methods in NLP (EMNLP 2019), Hong Kong, Nov 3-7, 2019 [Core A* ranked]
8. Anumeha Agarwal, Sunitha Selvan, Rosa George, **Sowmya Kamath S** and Anand Kumar M, "[ARS NITK at MEDIQA 2019:Analysing Various Methods for Natural Language Inference, Recognising Question Entailment and MedicalQuestion Answering System](#)", MEDIQA@ACL-BioNLP, Shared Task on Textual Inference and Question Entailment in the Medical Domain, co-located with 57th Annual Meeting of the Association for Computational Linguistics (ACL), Florence (Italy), Jul 28 - Aug 2, 2019. [Core A* ranked]
9. Tushaar Gangavarapu, Aditya Jayasimha, Gokul S Krishnan and **Sowmya Kamath S**, "[TAGS: Towards Automated Classification of Unstructured Clinical Nursing Notes](#)", 24th International Conference on Natural Language & Database Information Systems (NLDB 2019), Salford, England, June 26-28, 2019 [CORE ranked]

10. Gokul S Krishnan and **Sowmya Kamath S**, "[Ontology-driven Text Feature Modeling for Disease Prediction using Unstructured Radiological Notes](#)", 20th International Conference on Computational Linguistics and Intelligent Text Processing, April 7 to 13, 2019, La Rochelle, France [Core B Ranked]
11. Gokul S Krishnan and **Sowmya Kamath S**, "[Evaluating the Quality of Word Representation Models for Unstructured Clinical Text based ICU Mortality Prediction](#)", 20th International Conference on Distributed Computing and Networking (ICDCN 2019), January 4-7, 2019, IISc Bangalore, India [Core B Ranked]
12. M M Vikram, Aditya Anantharaman, and **Sowmya Kamath S**, "[An Approach for Multi-modal Medical Image Retrieval using Latent Dirichlet Allocation](#)", ACM India Joint International Conference on Data Science & Management of Data (CODS-COMAD 2018), Kolkata, January 3-5, 2019 [Core B Ranked]
13. M M Vikram, Aditya Anantharaman, Suhas B S and **Sowmya Kamath S**, "[Multimodal Medical Image Retrieval based on Latent Topic Modeling](#)", Medical Imaging meets NIPS (MED-NIPS 2018) Workshop, co-located with 32nd Conference on Neural Information Processing Systems (NIPS 2018), Dec 2-8, 2018. Montreal, Canada. [Core A* Ranked]
14. Karthik K and **Sowmya Kamath S**, "[A Composite Feature Modeling Approach for Content-based Medical Image Retrieval](#)", 13th International Conference On Industrial And Information Systems (ICIIS 2018), IIT Ropar, India, December 1-2, 2018 [Core C Ranked]
15. Vishakh Padmakumar, Rishab Ranga, Srivalya Elluru and **Sowmya Kamath S**, "[A Robust Approach to Open Vocabulary Image Retrieval with Deep Convolutional Neural Networks and Transfer Learning](#)", 24th PNC Annual Conference and Joint Meetings 2018 (PNC 2018), San Francisco, United States, October 26-30, 2018 [Scopus]
16. Gokul S Krishnan and **Sowmya Kamath S**, "[A Supervised Approach for Patient-specific ICU Mortality Prediction using Feature Modeling](#)", 7th International Conference on Frontier Computing (FC 2018), July 3-5, 2018, Malaysia. [Scopus]
17. Gokul S Krishnan and **Sowmya Kamath S**, "[A Supervised Learning Approach for ICU Mortality Prediction based on Unstructured Electrocardiogram Text Reports](#)", 23rd International Conference on Natural Language & Database Information Systems (NLDB 2018), Paris, France, June 13 - 15, 2018 [CORE ranked]
18. Pooja M Soundalgekar, Mukta Kulkarni, Divija Nagaraju and **Sowmya Kamath S**, "[Medical Image Retrieval Using Manifold Ranking with Relevance Feedback](#)", International Workshop on Semantic Multimedia Computing co-located with the 12th IEEE International Conference on Semantic Computing (ICSC 2018), Laguna Hills, California, USA [Scopus]
19. **Sowmya Kamath S** and Karthik K, "A Bag of Visual Words Model for Medical Image Retrieval", in the proceedings of the 7th International Engineering Symposium (IES 2018), Kumamoto University, Kumamoto, Japan, Mar 7-9, 2018. [submitted to arXiv, to be linked to the submission once it is approved]