Sunil Sahu

Bio Data

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Research Interests

Natural Language Processing, Machine Learning, Deep Learning.

Professional Experiences

- Oct-2017 to Postdoctoral Researcher, National Centre for Text Mining, The University of Manch-Present ester, Manchester, UK, Project: Cross-sentence relation extraction using deep neural network.
- July-Oct.2016 Research Internship, Graph and Text Analytics Group, Xerox Research Center India, Bangalore, Karnataka, India, Project: Phrase embedding for biomedical text using deep learning techniques.
- Feb-Apr.2016 Research Internship, Text Mining and Analitics Group, GVKBioscience Private Limited, Hyderabad, Telangana, India, Project: Relation extraction from clinical texts using domain invariant convolutional neural network.

Education

- 2013-2017 **PhD (Computer Science and Engineering)**, Department of Computer Science and Engineering, Indian Institute of Technology Guwahati, Assam, India.
- 2011–2013 **MTech (Computer Science)**, School of Computer and Information Science, University of Hyderabad, Hyderabad, Andhra Pradesh, India.
- 2005–2009 **BE (Computer Science and Engineering)**, Department of Computer Science and Engineering, Guru Ghasidash Vishwavidyalaya Bilaspur, Chhattisgarh, India.

Teaching Experiences

- 2017 **Deep Learning Techniques and its Applications**, *Course Instructor*, NIT Raipur, India, A short term course.
- 2016 Intelligent Systems and Interfaces, Teaching Assistant, IIT Guwahati.
- 2013 Natural Language Processing, Teaching Assistant, University of Hyderabad.
- 2012 **Data Mining**, *Teaching Assistant*, University of Hyderabad.

Technical Skills

Python, C, C++, Java, tensorflow, theano, scikit-learn, NLTK, CoreNLP, OpenNLP, MySQL, BANNER, LingPipe, UMLS, Metamap.

Scholarships/Grants

- 6-12~Aug~2016 Selected for the grant to attend ACL-2016 Conference from Google Research, Microsoft Research India and ACM-India/IARCS .
 - 2013-17 MHRD fellowship to do PhD.
 - 2011-13 MHRD fellowship to do MTech.

Recent Publications

- 2018 Drug drug interaction extraction from biomedical text using long short-term memory network, *Sunil Kumar Sahu*, *Ashish Anand*, Journal of Biomedical Informatics (In Press), https://arxiv.org/abs/1701.08303.
- 2018 What matters in a transferable neural network model for relation classification in the biomedical domain?, Sunil Kumar Sahu, Ashish Anand, Artificial Intelligence in Medicine 87 60-66.
- 2017 Learning local and global contexts using a convolutional recurrent network model for relation classification in biomedical text, Desh Raj, Sunil Kumar Sahu, Ashish Anand, CoNLL-2017, Vancouver, Canada.
- 2017 **Biomedical Event Trigger Identification Using Recurrent Neural Network**, *Rahul PVS*, *Sunil Kumar Sahu*, *Ashish Anand*, **BioNLP at ACL-2017**, Vancouver, Canada.
- 2017 Investigating how well contextual features are captured by Bi-directional Recurrent Neural Network Models, Kushal Kumar, Sunil Kumar Sahu, Ashish Anand, ICON-2017, Kolkata, India.
- 2016 Relation extraction from clinical texts using domain invariant convolutional neural network, Sunil Kumar Sahu, Ashish Anand, Krishna Dev Orungati, Mahanandeeshwar Gattu, BioNLP at ACL-2016, Berlin, Germany.
- 2016 Recurrent neural network models for disease name recognition using domain invariant features, Sunil Kumar Sahu, Ashish Anand, ACL-2016, Berlin, Germany.
- 2016 Predicting online doctor ratings from user reviews using convolutional neural networks, Ranti Dev Sharma, Samarth Tripathi, Sunil Kumar Sahu, Sudhanshu Mittal and Ashish Anand, ICMLC-2016, Osaka, Japan.
- 2015 Evaluation of distributed word representation for capturing semantics of biomedical text, *Muneeb Th, Sunil Kumar Sahu, Ashish Anand*, BioNLP at ACL-2015, Beijing, China.

Unpublished Works

- 2018 Siamese neural networks with random forest for detecting duplicate question pairs, *Ameya Godbole, Aman Dalmia, Sunil Kumar Sahu*, https://arxiv.org/abs/1801.07288.
- 2017 Unified neural architecture for drug, disease and clinical entity recognition, *Sunil Kumar Sahu*, *Ashish Anand*, https://arxiv.org/abs/1708.03447.
- Named entity recognition in tweets using conditional random field (CRF) and domain specific features.
- 2014 Object recognition in images through deep convolutional neural network (CNN).
- 2013 Digit recognition system in speech signal using hidden markov model (HMM) .
- 2013 Language identification system for small (ISCII coded) text corpus using different linear non-linear classifier.

Conference/Workshop/Summer School Participations:

- 2016 **ACL-2016**, *Humboldt University, Berlin, Germany*, August 7-12, Thanks to Google Research India, Microsoft Research India and ACM-India/IARCS for entire traveling and other expenses support.
- 2015 **ACL-2015**, *China National Convention Center Beijing, China*, July 30 to Aug 1, Thanks to IIT Guwahati for entire traveling and other expenses support.
- 2015 **Summer School on Machine Learning**, *Microsoft Research and IISc Bangalore* (*Karnataka*), 15 June to 26 June, Thanks to Microsoft Research India for entire traveling and other expenses support.
- 2015 Information and Communication Technology in Healthcare: Challenges and Promises, *IIT Guwahati (Assam)*, 25 March.
- 2014 National Workshop on GPU Programming and Application, *IIT Guwahati (Assam)*, 12 Sep to 14 Sep.
- 2008 Information Security: Practice and Challenges, ITGGU Bilaspur (CG), 9 Feb to 10 Feb.

Research Talks:

- 2017 Intelligence System Course, Indian Institute Technology Guwahati, Introduction of TensorFlow.
- 2015 ML Group, Indian Institute Technology Guwahati, Neural Probabilistic Language Model.
- 2015 Techniche-2015, *Indian Institute Technology Guwahati*, Evaluating distributed word representations for capturing semantics of biomedical concepts.
- 2015 Research Conclave-2015, Indian Institute Technology Guwahati, Recent Trends in Machine Learning.

Languages

First **Hindi**.

Second English.

Personal

Full Name Sunil Kumar Sahu.

Other Interest Athletics, Swimming.

References

Dr. Ashish Anand, Associate Professor, Indian Institute Technology Guwahati, email id: anand.ashish@iitg.ernet.in.

Dr. Niranjan Uma Naresh, *Applied Scientist*, **Microsoft Seattle**, email id: Niranjan.Uma@microsoft.com.