Sunil Sahu

Bio Data

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Research Interests

Natural Language Processing, Machine Learning, Deep Learning.

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*.

Professional Experiences

March-2019 to Present **Research Staff**, *Inception Institute of Artificial Intelligence*, Abu Dhabi, UAE.

Oct-2017 to March 2019 **Postdoctoral Researcher**, *The University of Manchester, Manchester, UK*.

July-2016 to Oct-2016 **Research Intern**, *Xerox Research Center India, Bangalore, Karnataka, India*.

Feb-2016 to Apr-2016 **Research Intern**, *GVKBioscience Private Limited, Hyderabad, Telangana, India*.

June-2008 to July-2008 **Engineering Intern**, *Orbit Technology, Hyderabad, Andhra Pradesh, India*.

June-2007 to July-2007 **Engineering Intern**, *Bharat Aluminium Company Ltd. (BALCO), Korba, Chhattisgarh, India*.

Projects

Dec-2019 to Present **Machine Translation**.

Aug-2019 to Dec-2019 **News Event Extraction**.

March-2019 to June-2019 **Knowledge Base Question Answering**.

Oct-2017 to March-2019 **Biomedical Relation Extraction using PubMed Articles**.

Aug-2015 to Sep-2017 **Information Extraction from Biomedical and Clinical Text**.

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.

Awards and Honors

2 Sep 2018 **Our team achieved 3rd rank in n2c2 shared task 2018 track 2**.

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**.

Publications

J1 **Adverse Drug Events and Medication Relation Extraction in EHRs with Ensemble Deep Learning Methods**, *Fenia Christopoulou, Thy Thy Tran, Sunil Kumar Sahu, Makoto Miwa, Sophia Ananiadou*, **Journal of the American Medical Informatics Association, 2019**, Impact Factor 4.270.

J2 **Drug drug interaction extraction from biomedical text using long short-term memory network**, *Sunil Kumar Sahu, Ashish Anand*, **Journal of Biomedical Informatics, 2018**, Impact Factor 2.95.

J3 **What matters in a transferable neural network model for relation classification in the biomedical domain?**, *Sunil Kumar Sahu, Ashish Anand*, **Artificial Intelligence in Medicine, 2018**, Impact Factor 3.57.

C1 **Inter Sentence Relation Extraction with Document-level Graph Convolutional Neural Network**, *Sunil Kumar Sahu, Fenia Christopoulou, Makoto Miwa, Sophia Ananiadou*, **ACL-2019**, Florence, Italy.

C2 **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.

C3 **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.

C4 **Recurrent neural network models for disease name recognition using domain invariant features**, *Sunil Kumar Sahu, Ashish Anand*, **ACL-2016**, Berlin, Germany.

C5 **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.

W1 **Biomedical Event Trigger Identification Using Recurrent Neural Network**, *Rahul PVS, Sunil Kumar Sahu, Ashish Anand*, **BioNLP at ACL-2017**, Vancouver, Canada.

W2 **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.

W3 **Evaluation of distributed word representation for capturing semantics of biomedical text**, *Muneeb Th, Sunil Kumar Sahu, Ashish Anand*, **BioNLP at ACL-2015**, Beijing, China.

B1 **Unified neural architecture for drug, disease and clinical entity recognition**, *Sunil Kumar Sahu, Ashish Anand*, Book Chapter- Elsevier- Deep learning Techniques for Biomedical and Health informatics (DL-BHI).

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.

Certified Courses

2014 **Machine Learning Course**, *by Prof. Andrew Ng, Coursera*, Sep to Dec 2014, Course Link .

Reviewer

Conferences:, *AAAI-2020, EMNLP-2018, 2019, NAACL-2019.*

Journals:, *Journal of Biomedical Informatics, IEEE/ACM Transactions on Computational Biology and Bioinformatics.*

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**.

References

Prof. Sophia Ananiadou, *Professor*, School of Computer Science, University of Manchester, United Kingdom, email id: sophia.ananiadou@manchester.ac.uk.

Dr. Ashish Anand, *Associate Professor*, Department of Computer Science, Indian Institute of Technology Guwahati, India, email id: anand.ashish@iitg.ernet.in.