Sawan Kumar

303, Machine and Language Learning Lab, CDS, IISc, Bangalore-560012, India

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RESEARCH INTERESTS

I am interested in Machine Learning (ML), and Natural Language Processing (NLP). My current research focus is on using textual descriptions to aid learning in general, and enabling few/zero-shot learning in particular.

EDUCATION

PhD, Computational and Data Sciences, 2017-present (CGPA: 9.3)
Indian Institute of Science (IISc), **Bangalore**, India
Advisor : Partha Pratim Talukdar

M.Tech, Telecommunication Systems, 2007-2012 (CGPA: 8.25)
Indian Institute of Technology (IIT) Kharagpur, India

B.Tech, Electronics and Electrical Communication, 2007-2012 (CGPA: 8.25)
Indian Institute of Technology (IIT) Kharagpur, India

RESEARCH EXPERIENCE

Department of Computational and Data Sciences (CDS), IISc, Bangalore, 2017- present
Machine and Language Learning (MALL) Lab
— Learning from and generating natural language explanations

Cognition Lab (Centre for Neuroscience, IISc, Bangalore), 2017-2018
— Creating efficient methods for evaluating whole brain connectomes

WORK EXPERIENCE

Amazon India, Bangalore, 2018
Applied Scientist Intern (3 months)
— Worked on improving natural language question-answering systems

Ittiam Systems, Bangalore, 2015-2016
Senior Engineer, Computer Vision and Machine Learning
—Contributed to the development of video analytics solutions for the retail industry

Ittiam Systems, Bangalore, 2012-2015
Engineer/Senior Engineer, Multimedia Systems
—Developed device drivers, abstraction layers for device drivers for embedded systems

PUBLICATIONS

[1] Kumar, Sawan, et al. "Improving Answer Selection and Answer Triggering using Hard Negatives." Accepted at the *Conference on Empirical Methods in Natural Language Processing (EMNLP)*. 2019.

[2] Kumar, Sawan, et al. "Zero-shot Word Sense Disambiguation using Sense Definition Embeddings." *Proceedings of the 57th Annual Meeting of the Association for Computational Linguistics (ACL)*. 2019.
Recipient of outstanding paper award

[3] Kumar, Sawan, et al. "ReAl-LiFE: Accelerating the Discovery of Individualized Brain Connectomes on GPUs." *Proceedings of the AAAI Conference on Artificial Intelligence (AAAI)*. 2019.

TEACHING

E1 246: Natural Language Understanding, Indian Institute of Science, Spring 2019
Teaching assistant for Prof. Partha Talukdar

SOFTWARE

ReAl-LiFE: Accelerating the discovery of individualized brain connectomes with GPUs (https://github.com/SawanKumar28/real-life)