Neetu Kushwaha

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Research Area

My research area is machine learning and artificial intelligence with a focus on deep learning, neural networks debugging, clustering, swarm optimization, and applications of AI and ML to computer vision, text data, recommendation systems, natural language processing, and healthcare. My career goal is to utilize my education and research skills to solve the challenging problems in various domains, applying machine learning, deep learning methodologies.

Computer Skills

- Programming languages: Python, C++
- Frameworks: Pytorch, TensorFlow, Numpy, Sklearn
- Database Systems: MySql
- Scientific: MATLAB, LATEX, Git

Language

- English, Hindi

Research Interests

Machine learning, Deep learning, Swarm Optimization, Data Mining, Artificial intelligence.

Work experience

Mar 2020 – Feb 2021	Postdoctoral Researcher	INRIA Rennes, France
	Pattern Mining for Neural Networks Debugging: Application to Speech Recognition	
2012-2014	Assistant professor	Galgotias University, India
	Computer Science & Engineering	

Education

2015-2019	Ph.D. (Machine Learning)	IIT Roorkee
	Research Areas: Clustering, Metaheuristics, Recommendation System Thesis: Enhanced Metaheuristics Based Clustering Algorithms and Their Applications.	
2010-2012	M.Tech in Computer Science & Engineering	NIT Jalandhar, India
	Thesis: Software Cost Estimation using Soft Computing Method	
2005-2009	B.Tech. in Computer Science & Engineering	MITS, Gwalior, India.

Publications

1. Neetu Kushwaha, Millie Pant, "Fuzzy electromagnetic optimisation clustering algorithm for collaborative filtering", Journal of Experimental & Theoretical Artificial Intelligence (2019): 1-16.

2. Neetu Kushwaha, Millie Pant, "Textual data dimensionality reduction-a deep learning approach", Multimedia Tools and Applications 79.15 (2020): 11039-11050.

3. Neetu Kushwaha, Millie Pant, "Link based BPSO for feature selection in big data text clustering", Future Generation Computer Systems 82 (2018): 190-199.

4. Neetu Kushwaha, Millie Pant, Surya kant, Vinay Kumar jain, "Magnetic optimization algorithm for data clustering", Pattern Recognition Letters 115 (2018): 59-65.

5. Neetu Kushwaha, Millie Pant, "Modified particle swarm optimization for multimodal functions and its application", Multimedia Tools and Applications 78.17 (2019): 23917-23947.

   Note: For complete list, please see here.

Projects

Neural Network debugging

- Develop debugging strategies to construct trustworthy networks by detecting faulty neurons at test time.

Text data dimensionality reduction for deep learning applications

- Feature selection for text document using deep learning.

Fuzzy electromagnetic optimisation clustering algorithm for collaborative filtering

- Recommender system for Movielens dataset using clustering.

References

1. Dr. Millie Pant, Professor, Indian Institute of Technology, Roorkee, India.

2. Dr. Suryakant, Post-Doc Researcher at INSERM, Bordeaux population health center, France.