

# Ashish Gupta

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INTERESTS	Machine Learning, Natural Language Processing, Information Extraction, Information Retrieval, Reinforcement Learning
EDUCATION	<p><b>M.Tech(CSE) with specialisation in Machine Learning</b></p> <ul style="list-style-type: none"><li>▪ <b>IIIT Bangalore</b>, Bangalore, Karnataka Jul 2016 – Jul 2018<ul style="list-style-type: none"><li>• Thesis: Neural Attention Reader for Video Comprehension</li><li>• Adviser: Prof. Manish Gupta</li><li>• Focus: Information Retrieval, Information Extraction, Videos, Attention Mechanism, Bidirectional LSTM, Distant Supervision, Differential Weighing</li></ul></li></ul> <p><b>B.Tech in CSE</b></p> <ul style="list-style-type: none"><li>▪ <b>SRMCEM(Uttar Pradesh Technical University)</b>, Lucknow, Uttar Pradesh Aug 2008 – Jun 2012<ul style="list-style-type: none"><li>• Deans List for 3 years.</li></ul></li></ul>
RELEVANT EXPERIENCE	<p><b>Walmart Labs India</b>, Bangalore</p> <ul style="list-style-type: none"><li>▪ <b>Data Scientist</b> Aug 2019 – Present<ul style="list-style-type: none"><li>• Working in Catalog Data Science team.</li><li>• Built deep learning models for attribute extraction from text.</li><li>• Developed a Smart normalization tool to match the non-standard/junk text present in the catalog to the standard text.</li><li>• Developed BERT based models for classification and sequence labeling in Multi-lingual models. These models are further used in product search.</li><li>• Lead an initiative to build an autotagger tool for reducing the amount of tagged data and build efficient models with limited data.</li><li>• Worked on jointly leveraging strong supervision data along with weak supervision data to train neural models.</li><li>• Lead an initiative on discovering high-quality entities/attributes from Walmart product reviews. This will help to enrich the catalog in a more fine-grained manner.</li></ul></li><li>▪ <b>Senior Statistical Analyst</b> Jul 2018 – Jul 2019<ul style="list-style-type: none"><li>• Worked on retail graph for home and furniture section, which includes entity extraction, style prediction. Built models which helped in substitute and complementary products recommendation.</li></ul></li></ul> <p><b>VideoKen Software Pvt. Ltd</b>, IIIT Bangalore Innovation Centre</p> <ul style="list-style-type: none"><li>▪ <b>Visiting Researcher</b> Jan 2018 – Jun 2018<ul style="list-style-type: none"><li>• Worked on neural multi-task reader for Video Comprehension. Used Attention Mechanism, Bidirectional LSTM, self-attention and did meaningful bifurcations of the raw text to complete the task.</li></ul></li></ul> <p><b>IIIT Bangalore</b>, Bangalore</p> <ul style="list-style-type: none"><li>▪ <b>Teaching Assistant</b> Jan 2018 – Jun 2018<ul style="list-style-type: none"><li>• Teaching Assistant for courses: Maths for Machine Learning and Practical Machine Learning</li></ul></li></ul> <p><b>Tata Consultancy Services</b>, Kolkata</p> <ul style="list-style-type: none"><li>▪ <b>Systems Engineer(Data)</b> Nov 2012 – Jun 2016<ul style="list-style-type: none"><li>• Worked in Oracle apps (an ERP tool) as an OTR consultant. Worked in GE Healthcare projects.</li><li>• Worked in SCM(Supply Chain Management), Purchase Order and Order Management modules of Oracle apps.</li><li>• Worked in project Germany LCS Project, WIPROGE LE Merger, Oracle R12 upgrade where I made and updated some of the custom PL/SQL codes.</li></ul></li></ul> <p><b>PUBLICATIONS</b></p> <ul style="list-style-type: none"><li>▪ <b>Learning with Limited Labels via Momentum Damped Differentially Weighted Training</b><ul style="list-style-type: none"><li>• Rishabh Mehrotra, Ashish Gupta in KDD 2020.</li></ul></li><li>▪ <b>Joint Attention Neural Model for Demand Prediction in Online Marketplaces</b><ul style="list-style-type: none"><li>• Ashish Gupta, Rishabh Mehrotra in NLDL 2020.</li></ul></li><li>▪ <b>Hyperparameter optimization with REINFORCE and Transformers</b><ul style="list-style-type: none"><li>• Chepuri Shri Krishna, Ashish Gupta, Swarnim Narayan, Himanshu Rai, and Diksha Manchanda got accepted in IEEE BigData 2020.</li></ul></li><li>▪ <b>Ultron-AutoML: an open-source, distributed, scalable framework for efficient hyper-parameter optimization</b></li></ul>

	<ul style="list-style-type: none"> <li>Swarnim Narayan, Chepuri Krishna, Varun Mishra, Abhinav Rai, Himanshu Rai, Chandrakant Bharti, Gursirat Singh, Ashish Gupta, and Nitinbalaji Singh in IEEE BigData 2020.</li> </ul>
	<ul style="list-style-type: none"> <li><b>Sequence-aware Reinforcement Learning over Knowledge Graphs</b> <ul style="list-style-type: none"> <li>Ashish Gupta, Rishabh Mehrotra in RecSys REVEAL 2019.</li> </ul> </li> <li><b>Neural Attention Reader for Video Comprehension</b> <ul style="list-style-type: none"> <li>Ashish Gupta, Rishabh Mehrotra, Manish Gupta in KDD Deep Learning Day 2018.</li> </ul> </li> </ul>
PATENTS	<ul style="list-style-type: none"> <li><b>Ultron-AutoMLv2: a distributed framework for efficient hyper-parameter optimization (HPO) of ML models</b> <ul style="list-style-type: none"> <li>Chepurishri Krishna, Amit Agarwal, Ashish Gupta, Swarnim Narayan, Himanshu Rai, Varun Mishra, Abhinav Rai, Chandrakant Bharti, Gursirat Singh and Nitinraj Balajisingh</li> </ul> </li> </ul>
BLOGS	<ul style="list-style-type: none"> <li><b>An Introduction to Meta-Learning</b></li> <li><b>Introduction to Reinforcement Learning</b></li> </ul>
PROJECTS	<p><b>Deep Recurrent Generative Decoder for Abstractive Text Summarization (EMNLP 2017)</b> Sequence to sequence oriented encoder decoder model with attention mechanism and variational auto encoders.</p> <ul style="list-style-type: none"> <li>Novel approach to text summarization with GRU and attention mechanism. Oct 2019 – Dec 2019</li> </ul> <p><b>Hierarchical Attention Networks for Document Classification</b> Implementation of Hierarchical Attention Networks paper NAACL 2016.</p> <ul style="list-style-type: none"> <li>Movie reviews from IMDB dataset are used for prediction. Mar 2018 – Mar 2018</li> </ul> <p><b>Image-based recommendations on Styles and Substitutes,</b> Guide:- Prof. Dinesh Babu Jayagopi</p> <ul style="list-style-type: none"> <li>Recommending apparels to users based on their choice and the complementary products.This work was done on a subset of Amazon dataset. <b>Click here</b> to checkout the video. Mar 2017 – May 2017</li> </ul>
ACHIEVEMENTS / CO-CURRICULAR ACTIVITIES	<ul style="list-style-type: none"> <li>Top 12%(Placed 30 out of 252 teams) in KDD 2019   Policy Learning for Malaria Control - Maximize rewards for malaria prevention sequential decision making task.</li> <li>Top 20%(Placed 303 out of 1571 teams) in Google QUEST Q&amp;A Labeling - Improving automated understanding of complex question answer content.</li> <li>Top 3%(Placed 94 out of 4037 teams) in Quora Insincere Question Classification - To identify and flag insincere questions in Quora.</li> <li>Top 1.4%(Placed 28 out of 2000 teams) in Microsoft AI India Challenge 2018 - Ranking passage according to relevance containing answer to a given question.</li> <li>Top 12%(Placed 454 out of 3967 candidates) in Kaggle (TalkingData AdTracking Fraud Detection) Challenge - Predicting whether a user will download an app after clicking a mobile app ad.</li> <li>Achieved AIR 56 in ISRO Scientist/SC exam(July'16).</li> <li>Qualified GATE'16 with 98.8 percentile(Feb'16).</li> </ul>
AWARDS & SCHOLARSHIPS	<ul style="list-style-type: none"> <li>Winner of AI Hackathon organized by Target HR Bangalore Aug 2018</li> <li>Finalist in Synchron Hackathon, Bangalore Sep 2017</li> <li>Dean's List, Fall 2008 through Spring 2011, SRMCEM 2008 – 2011</li> </ul>
PROFESSIONAL AFFILIATIONS & ACTIVITIES	<p><b>Natural Language Processing with Attention Models</b></p> <ul style="list-style-type: none"> <li>Coursera 2020 – Present</li> </ul> <p><b>Reviewer of IR Journal: Learning from User Interactions</b> 2019 – Present</p> <p><b>Association for Computing Machinery</b> 2017 – Present</p>
SKILLS	<ul style="list-style-type: none"> <li>Tensorflow, PyTorch, Keras, NLTK, scikit-learn, spaCy, seaborn(Statistical Data Visualization)</li> <li>C, Java, Python</li> <li>Pycharm, Google Colab, AWS, Eclipse</li> <li>MySQL, MongoDB, MS SQL Server</li> </ul>