AASHISH KUMAR

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EDUCATION:

YEAR	SCHOOL	DEGREE	EVALUATION
2017-2019	**University of Texas at Austin**	Master of Science in Engineering in Applied Maths	**GPA : 3.97/4.0**
2011-2015	**Indian Institute of Technology, Kharagpur**	B.Tech in Electronics and Electrical Communication Engineering	**CGPA : 9.57/10** **Course Rank : 2/67**
2019	Udacity	Natural Language Processing Nanodegree	--

PROGRAMMING LANGUAGE Python (NumPy, Pandas, SciKit, TensorFlow, Keras), C, C++, JavaScript, Perl, HTML, MATLAB, Git

PROJECTS:

Conversational AI – Stackoverflow Assistant Chatbot

- Built a conversational bot in Telegram that assists with search on StackOverflow
- Implemented intent recognition to distinguish programming related questions from the general ones
- Bot returns the link to most relevant StackOverflow question if the question is based on programming language.
- If the question is a general one, then the bot maintains a dialogue which is implemented using seq2seq model with attention trained on Cornell movie dialogue database.

Sentiment Analysis on IMDB Dataset using Deep Learning

- Developed deep learning model to do sentiment analysis. Parsed the text using BeutifulSoup and regular expression and using the gensim library, derived the word vectors on training data.
- Used a LSTM model using keras followed by dropouts and dense layers, achieved 81.5% accuracy

Neural Machine Translation

- Developed machine translation model for converting English sentences to French sentences.
- Developed deep learning models like Bidirectional RNN along with embedding layer to achieve high accuracy

Robust Reinforcement Learning, Masters Report, Guide: Prof. John J. Hasenbein

- Worked on making the RL policies like Deep Q-learning robust to change in environment parameters
- Noisy rewards are generated instead of true reward to represent the noise in environment. The reward function is approximated using a neural network which tries to weaken the noise and generate rewards that are closer to true rewards
- Along with Deep-Q learning, this reward function is trained and tested on different environments

Image Classification on CIFAR-10 Dataset

- Implemented image classification algorithm on CIFAR-10 dataset in Python
- Developed codes for Convolutional neural network with Adam optimizer, relu activation function, used batch normalization, performed cross validation to tune the hyperparameters. Trained two models of ConvNet to increase the accuracy

WORK EXPERIENCE:

Data Scientist, Walmart, Bentonville, Arkansas (Jun'19-Present)

- Working with Data Science team of Walmart. Working on forecasting, anomaly detection. Developed various machine learning models to improve the accuracy of the forecasts. Worked on Azure databricks platform to handle big data.

Machine Learning Intern, VISA Research, Austin, Texas, US (Jan'19-May'19)

- Worked with Data Science and AI team of VISA Research on predictive maintenance and failure prediction of servers
- Developed Encoder Decoder deep learning models in python using keras and tensorflow for predicting server failures in future. Trained the model on GPU clusters. Developed ARMA models and compared the performance with deep learning models

Teaching Assistant for Machine Learning Courses, UT Austin, Austin, Texas, US (Jan'18-May'19)

- Teaching assistant for machine learning courses at UT Austin with Prof Joydeep Ghosh, Prof Jason Duan and Prof Rajiv Garg
- Helped students with machine learning concepts, guided them in their projects. Responsible for creating assignments, exams.

Software Developer Intern, Shutterfly Inc, Redwood City, California, US (May'18-Aug'18)

- Worked on back-end and front-end design. Created API using Java and springboot, created UI using ReactJs, Redux.

Associate Engineer in the Adreno Graphics team, Qualcomm India Pvt Ltd, Bangalore, Karnataka, India (June'15-July'17)

- Developed codes to automate the backend flows and helped reduced the overall run time for the internal tools
- Part of 4 successful snapdragon chips (SD 630, SD 640, SD 430, SD 435) which brought millions in revenue to Qualcomm

COURSES:

Machine Learning Courses	Reinforcement Learning, Convolutional Neural Network for Visual Recognition, Natural Language Processing with Deep Learning, Sequence Models, Intro to Statistical Learning, Pattern Recognition
Statistics Courses	Bayesian Statistical Methods, Time Series Analysis, Markov Decision Processes, Probability and Stochastic Processes
Other Courses	Design and Analysis of Algorithms, Data Structures, Image Processing, Convex Optimization, Signal Processing

SCHOLASTIC ACHIEVEMENTS:

- Recipient of the prestigious OPJEMS Scholarship for year 2012, University of Tokyo IIT Undergraduate Students Scholarship for year 2013
- Secured **AIR 664 in IITJEE – 2011** among 4.85 lakh examinees (99.8 percentile)