ANKUR KUMAR

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EDUCATION

Indian Institute of Technology, Kanpur JULY 2014 - MAY 2018
Bachelor of Technology in Computer Science and Engineering
Cumulative Grade Point Average : 9.0/10

WORK EXPERIENCE

Samsung R&D Institute, Bangalore JULY 2018 - PRESENT
Software Engineer

- Worked on building an end-to-end speech recognition system for Bixby, Samsung's AI assistant
- Experimented with multi-task and transfer learning based strategies to improve model performance
- Paper titled "Improved multi-stage training of online attention-based encoder-decoder models" was accepted in the 2019 IEEE Automatic Speech Recognition and Understanding Workshop explaining above strategies
- Explored techniques to integrate personalization and speaker adaptation tasks in an end-to-end fashion
- Involved in development of a framework for deployment of server-based end-to-end speech recognition

Adobe Systems, Bangalore MAY 2017 - JULY 2017
Research Intern

- Surveyed existing works on video representation and action, affect and semantics feature extraction
- Analyzed commercial brand videos using recent deep learning techniques to understand produced content
- Developed machine learning methods to generate new videos based on a training corpus of brand videos

AWARDS & ACHIEVEMENTS

- Received the Samsung Citizen Award for outstanding performance and contributions 2018-19
- Received the IIT Kanpur Academic Excellence Award for outstanding academic performance 2015
- Secured AIR-390 in IIT-JEE Advanced and AIR-375 in JEE Mains among 1.3M candidates 2014
- Among Top 1% candidates in Physics Olympiad, selected for Indian National Physics Olympiad 2014

PROJECTS

Factoid Question Generation from Paragraph FEB 2018 - APR 2018
Course Project (Natural Language Processing), Mentor: Prof. Harish Karnick

- Surveyed existing literature on factoid question generation to build a pipeline with paragraph as input
- Achieved 71.3% accuracy on classifying a sentence as positive, i.e., containing facts for generating question(s)
- Applied attention-based encoder-decoder framework to generate questions from positive sentences in paragraphs of SQuAD dataset

Adversarial Variational Bayes in Edward FEB 2018 - APR 2018
Course Project (Topics in Probabilistic Modeling and Inference), Mentor: Prof. Piyush Rai

- Implemented Adversarial Variational Bayes (AVB) in Edward, a probabilistic modeling framework in Python
- Obtained results comparable with that in the paper by Mescheder et. al. on binarized MNIST dataset
- Explored Edward's high level abstraction to random variables, inferences and its plug and play architecture

Domain Adaptation using Generative Adversarial Networks SEP 2017 - NOV 2017
Course Project (Visual Recognition), Mentor: Prof. Vinay P. Namboodiri

- Project aimed at Unsupervised Domain Adaption based on the paper by Bousmalis, Konstantinos, et al.
- Implemented PixelDA-GAN (generative adversarial network in the paper) and domain classifier for the task
- Experimented with other GANs using the datasets MNIST to MNIST-M and MNIST to USPS for comparision

COURSEWORK

Machine Learning: Machine Learning Techniques, Natural Language Processing, Topics in Probabilistic Modeling and Inference, Visual Recognition

Programming: Fundamentals of Computing, Data Structures and Algorithms, Design and Analysis of Algorithms, Functional Programming

Others: Probability and Statistics, Linear Algebra and Differential Equations

TEST SCORES

- **GRE:** 330/340 (170Q, 160V, Date of Test: September 13, 2019)
- **TOEFL:** 107/120 (R28, L29, S23, W27, Date of Test: October 4, 2019)