Anup Anand Deshmukh

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EDUCATION	**International Institute of Information Technology, Bangalore.**		*May 2019*

	Degree	Integrated Masters in Information Technology
	CGPA	3.27/4 (At the end of eighth semester)
	Coursework	Reinforcement Learning, Advanced Machine Perception, Machine Learning, Automata Theory and Computability, Big Data Algorithms, Advanced Cryptography, Linear Algebra, Signal Processing, Data Structures - Algorithms
	Teaching Assistant	CS 302 Theory of Automata and Computations (Fall 2018)

INTERESTS

Deep learning for Computer Vision and Recommender Systems

PUBLICATIONS

Anup Deshmukh, Pratheeksha Nair, Shrisha Rao, **"A Scalable Clustering Algorithm for Serendipity in Recommender Systems,"** Accepted in the ICDM 2018 workshop - SAREC

RESEARCH EXPERIENCE

A Minimax Game for User Satisfaction in Recommender Systems *Ongoing*
Multimodal perception lab at IIITB *Guide: Prof. Dinesh Babu*
- Formalizing the Minimax game, which can potentially model generator in Generative Adversarial Network - GAN, to give unexpected yet relevant recommendations.

Scaling up Simhash *Jan 2018-Aug 2018*
Under review as a conference paper at AAAI 2019 *Guide: Dr. R. Pratap*
- Proposed a dimensionality reduction sketching algorithm - simsketch - which maintains an estimate of the cosine similarity between original real valued vectors.

Fast and Provable Concept Decompositions in Large Text Corpus *Sept 2017-April 2018*
Under review as a conference paper at ACML 2018 *Guide: Dr. R. Pratap*
- Proposed an algorithm by considering the spherical clustering problem for large sparse document collections. Proved that, with our approach the computational complexity in SPKM++ can be decreased while retaining the $\mathcal{O}(\log k)$ approximation guarantee to the optimal clustering result.

WORK EXPERIENCE

Perception of Emotions from Audio Signals *Ongoing*
Intern at FAST lab-CentraleSupelec, Rennes-France *Guide: Prof. Renaud Seguier*
- Analyzed different set of acoustic features which are designed to detect the perceptual content of audio with Convolutional Neural Network (CNN) in focus. Proposed i-CNN achieved 90.2% of categorical accuracy. Working on modelling human stress in the learnt 3-D emotion space.

Spatio-Temporal Features of Crowd Models *May 2017-July 2017*
Intern at Murdoch University, Perth-Australia *Guide: Prof. Ferdous Sohel*
- Worked on a problem of crowd counting which used conditional GAN by extending it to crowd datasets like SHOCK and WIDER FACE.

Slicepay, Bangalore - India *May 2016-July 2016*
Full Stack Developer
- Built the browser extension using JavaScript which gave access to the Slicepay's payment plans right from user's merchant website. Link: Slicepay's chrome extension

COURSE PROJECTS

Merge LSTM model for Image Description Generation *August 2017-April 2018*
Course: Research Elective *Guide: Prof. Dinesh Babu*
- Analyzed and built the retrieval based model using Keras on the construction which uses both LSTM's for language modelling and CNN's for generating image representation.

Automated Essay Scoring with Cross Feature Vector Generation *August 2017-Dec 2017*
Course: Machine Learning I *Guide: Prof. G Srinivasa R.*
- Designed and implemented the Intelligent Text Rater (ITR) with the proposed novel approach of feature vector generation of text essays. ITR achieved MSE as low as 0.729 for essay ratings.

SKILLS

	Languages	Python, Keras, TensorFlow, C++, JScript
	Tools	Matlab, Latex

ACADEMIC ACHIEVEMENTS

2016	Winner of the Hackathon held in IIIT-B as part of the Signal Processing course.
2016	Designed and created an Intellectual Property Management Portal for IIIT-B.
2014	Top 1% in Maharashtra State's Higher Secondary School Certificate (HSC) exam.
2012	Secured All India Rank 940 in International English Olympiad.

LEADERSHIP

2018	**Academic Support**, at Make A Difference teaching basic sciences to underprivileged students.
2017	**Curator**, TEDx IIITB; **Co-Founder**, IIITB 'Comic Club'
2014	**Social Media Team**, Microsoft TechEd 2014