

Anup Anand Deshmukh

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EDUCATION	International Institute of Information Technology, Bangalore. May 2019 <div><div>Degree</div><div>CGPA</div><div>Coursework</div></div> <div><div>Integrated Masters in Information Technology</div><div>3.14/4 (At the end of seventh semester)</div><div>Advanced Machine Perception, Machine Learning, Automata Theory and Computability, Big Data Algorithms, Advanced Cryptography, Linear Algebra, Signal Processing, Data Structures - Algorithms</div></div>
INTERESTS	Deep learning in Computer Vision and Text Analysis
RESEARCH EXPERIENCE	A Serendipitous Clustering Algorithm For Improving User Satisfaction in Recommender Systems Jan 2018-April 2018 <i>Under review as a conference paper at RecSys 2018</i> Guide: Prof. Shrisha Rao <ul style="list-style-type: none">Designed an approach that efficiently tackles the problem of high sparsity and overspecialization in collaborative filtering.Effectuated serendipity in movie recommender systems with an end-to-end algorithm, Serendipitous Clustering for Collaborative Filtering (SC-CF) that considers diversity, unexpectedness and relevance. Fast and Provable Concept Decompositions in Large Text Corpus Sept 2017-April 2018 <i>Under review as a conference paper at ACML 2018</i> Guide: Dr. R. Pratap <ul style="list-style-type: none">Experimentally validated the SPKM++ algorithm by considering the spherical clustering problem for large sparse document collections.Proved that using Markov Chain Monte Carlo (MCMC) seeding technique, the computational complexity in SPKM++ can be decreased while retaining the clustering results. Scaling up Simhash Jan 2018-April 2018 <i>Under review as a conference paper at CIKM 2018</i> Guide: Dr. R. Pratap <ul style="list-style-type: none">Proposed a sketching algorithm - simsketch - that can be applied on top of simhash which further reduces the dimension of the data while maintaining an estimate of the cosine similarity between original real valued vectors.
WORK EXPERIENCE	Audio-video analysis and perception for detecting subtle changes Ongoing <i>Intern at FAST lab-CentraleSupélec, Rennes-France</i> Guide: Prof. Renaud Segquier <ul style="list-style-type: none">Working on Audio-Video modalities for finding the subtle changes in human face to model stress in real time. CNN based Spatio-Temporal Features of Crowd Models May 2017-July 2017 <i>Intern at Murdoch University, Perth-Australia</i> Guide: Prof. Ferdous Sohel <ul style="list-style-type: none">Worked on a problem of crowd counting which used conditional GAN proposed by Philip Isola, UC Berkley and was extended to crowd dataset like SHOCK and WIDER FACE.Qualitatively analyzed the CNN based models which effectively learn spatial features together with appearance features for video analysis. SlicePAY (formerly Buddy), Bangalore, India May 2016-July 2016 <i>Full Stack Developer</i> <ul style="list-style-type: none">Led the task of bringing flexibility in payment through India's top 10 merchant websites.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 <i>Research Elective, IIITB-India</i> Guide: Prof. Dinesh Babu <ul style="list-style-type: none">Analyzed and built the retrieval based model using Keras and Tensorflow 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 <i>Course: Machine Learning I</i> Guide: Prof. G Srinivasa R. <ul style="list-style-type: none">Designed and implemented the Intelligent Text Rater(ITR) with the proposed novel approach of feature vector generation of text essays which significantly reduces the required training data size.

Automatic Verification of Program Correctness

Jan 2017-May 2017

Course: *Programming Languages*

Guide: *Prof. Manish Gupta*

- Studied the Ullman's algorithm and Backtracking procedures used in converting one program dependence graph (PDG) to another in order to find the distances in submitted codes through Sketch tool.

SKILLS

Languages

Python(Keras, Tensorflow), C++, Prolog, JScript

Tools

Matlab, Arduino(IDE), 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 which secured place in top 3 from 17 teams.
- 2014 Top 1% in Maharashtra State's Higher Secondary School Certificate (HSC) exam.
- 2012 Secured All India Rank 940 in International English Olympiad.
- 2011 Secured All India Rank 2380 in 10th National Cyber Olympiad.

LEADERSHIP

- 2017 **Curator**, TEDx IIITB
- 2016 **Member**, IIITB 'Movie Club'.
- 2015 **Editorial Board**, IIITB's '8 bit' magazine.
- 2014 **Co-Founder**, IIITB 'Comic Club'.
- 2014 **Social Media Team**, Microsoft TechEd 2014.