Anil Kumar | IITMadras

Indian Institute of Technology, Madras

+91-9884180067 • anilcs13m@gmail.com

Organizational Experience

- **Software Engineer at AllGoVision Technologies, Jan 2017-Oct 2017**
  - Work on preprocessing of more than 2TB of unstructured videos and images data create clean data for training.
  - Work on algorithms like DBSCAN, K-Mean, PCA, and hierarchical clustering.
  - Work on Preprocessing steps like augmentation, outliers removal, similarity check, merge and remove classes.
  - Work on different types of face detection and cropping algorithms using dlib, opencv and deep learning base.
  - Work on Age and gender detection and classification.
  - Finetune CNN for face recognition with 3.4k classes and approx 1k images per class.
  - Creation of big dataset of 10k classes for training features embedding using triplet loss.
  - Features embedding training and testing on LFW dataset achieve accuracy approx 98.4%.
  - Work on cleaning and creation of dataset for OCR training for ANPR.
  - Work on generative model for creating more image data for making balanced classes.
  - Training of LeNet for digit and character classification using dlib and caffe.
  - Create video dataset each frame tag with coordinates and number plate for checking ANPR detection accuracy.
- **Software Engineer(Intern) at AllGoVision Technologies, Oct 2016-Dec 2016**
  - Developed a script for Google and Bing images search downloader with approx 1k images per celebrity.
  - Developed a script for downloading VGG Face Dataset using links information given by oxford vgg group.
  - Developed a script for extracting and cropping only faces from full images using Haar Cascade and vgg Co-ordinates.
  - Created dataset with face and non-face images for face detection and validation.
  - Finetune AlexNet Convolutional Neural Networks using face and non-face dataset for detection and validation.
  - Created dataset of Indian face with more than 2k classes for triple loss embedding and trained triple loss embedding.
  - Preprocessing of dataset and making available for Convolutional Neural Networks training.
  - Finetune VGG Convolutional Neural Networks for face recognition with 2.6k classes, approx 1k images per class.

Skills

- Languages - Python, C, C++, R
- Tools - Caffe, Tensorflow, Scikit-learn, Opencv, Dlib, Numpy
- Area of Interest - Machine Learning, Deep Learning, Algorithms, Data Structure

Education

Program	Institution	%/CGPA	Year of completion
M.Tech(CSE)	Indian Institute of Technology Madras	6.59	2015
B.Tech(CSE)	G.B.T.U, Lucknow	68.54	2011
XIIth Std. (U.P. Board)	Kishan Int Coll Dundipura Kheria, Agra	65.20	2005
Xth Std. (U.P. Board)	G R INT COLL Kurra Chittar Pur, Agra	61.16	2003

Scholastic Achievements

- Secured **AIR 124** among **2.3** Lakhs aspirants in GATE 2013

Projects

M.Tech Thesis, IIT Madras, Jan 2014 - May 2015

Project Guide: Professor N.S Narayanaswamy CSE Dept, IIT Madras

"An Improved Approximation Algorithm for Steiner Tree"

The Steiner tree problem is one of the most fundamental NP-hard problems. We come up with a new Heuristic algorithm for constructing a Steiner tree for a given Graph and steiner node.

Course's and Learning Projects

1. Sentiment Analysis for Reviews

Given a text document as a source with labelled as 1000 positive and 1000 negative reviews and predict the sentiment of new reviews. Trained model by using SVM and Random Forest.

2. Question Classification

Given a text document as a source which contain different of question like what, who, where. task is to classified the question it belong, for that i used convocation neural network implemented in deep learning library tensorflow in python and word2vec is used for word vector generation.

Positions and Responsibility

- Teaching Assistant :-Computational Engineering (CS1100) from Aug 2013 - May 2014 *IIT Madras*
- Teaching Assistant:- Introduction to CSE (CS1300) from Aug 2014 - Dec 2014 *IIT Madras*
- Teaching Assistant:-Advanced Algorithms (CS6841) from Jan 2015 - May 2015 *IIT Madras*

Course Work

- Natural Language Processing
- Advanced Data Structures and Algorithms
- Topics in Design and Analysis of Algorithms
- Advanced Algorithms
- Theory and Applications of Ortologies
- Mathematical Concepts for Computer Science

Programming Experiences and Training Programme

- Advanced Programming Laboratory at IIT Madras!
- Six Weeks summer training on J2EE from 15 July to 25 August 2011 at Cetpa Infotech pvt. Ltd., Noida
- Programming Badge by Hackerrank in "Machine Learning" and "Algorithms Domain" Domain".!
- Network Management course held during jun-jul 2010 conducted at LNMIIT Jaipure by Nettech pvt. Ltd
- Attained two days workshop on Java Held on 10th and 11th September 2011 by Cetpa Infotech pvt. Ltd., Noida

Extra - Curricular Activities

- Participated in the annual Terry Fox Run in 2014, Chennai
- Got Second Position in Cricket in CS Sports Competitions in 2013, IIT Madras.
- Participated in Football CS Sports Competitions in 2013, IIT Madras.

Web Links

- https://github.com/anilcs13m
- https://in.linkedin.com/in/anilcs13m

Declaration

I hereby declare that all the information given above is true to the best of my knowledge as on November 22th, 2017.