AMAN JAISWAL

Computer Science and Engineering - Senior - IIT Dharwad

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EDUCATION

Indian Institute of Technology, Dharwad	Expected : 2020

Bachelor of Technology (B.Tech).
Computer Science and Engineering, CGPA: 8.0/10.0

Disha Delphi Global Sr. Sec. School	March 2016

HSC/Intermediate (RBSE).
Kota, Rajasthan, Percentage: 84.2%

Nav Jeevan Mission School	March 2014

SSC/High-School (CBSE).
Kasia, Uttar Pradesh, CGPA: 10.00/10.00

PUBLICATIONS

En-VStegNET: Video Steganography using spatio-temporal feature enhancement with 3D-CNN and Hourglass

*International Joint Conference on Neural Networks, IJCNN, 2020 : *Under Review*

SENIOR THESIS

AutoClean: Autonomous Data Cleaning Pipeline	August 2019 - Present
Guide : Mr. Vitobha Munigala, Prof Kedar K — IBM Research Labs, IIT Dharwad	*Machine Learning*

· Developing a system for fully automated holistic data cleaning to free data of errors and inconsistencies and increase the quality of data, thereby increasing the performance of the underlying machine learning model.

RESEARCH PROJECTS

Fully Automatic Video Colorization	May 2019 - July 2019
Guide : Prof Aditya Nigam — IIT Mandi	*Deep Learning*

· Developed a 3-staged pipeline to automatically colorize a gray-scale video using deep learning. 1st stage groups video frames into scenes, 2nd stage uses a novel patch based CNN model to colorize the maximum entropy frame from each scene, 3rd stage uses this colourized frame as reference frame to colourize the complete scene using a deep color propagation network.

Automatic Generation of X-Ray Report	May 2019 - July 2019
Guide : Prof Aditya Nigam — IIT Mandi	*Deep Learning*

· Developed an end-to-end model for automatic generation of X-Ray report from an X-Ray image. A novel deep learning language model with attention was designed to generate X-Ray report from the visual features extracted by pre-trained ResNET and DenseNET models trained on Chest X-Ray 14 Dataset.

Video Steganography	May 2019 - Present
Guide : Prof Aditya Nigam — IIT Mandi	*Deep Learning*

· Working on to extend VStegNET, a full video fragile steganography network, published in BMVC'19 to be robust to perturbations such as lossy compression, cropping, blurring, noise etc.

ENGINEERING PROJECTS

Distributed Backup Server	August 2019 - November 2019
Prof. Kedar K. - IIT Dharwad (Course Project)	*Distributed Systems*

- Developed a distributed backup server for a local area network to free disk space of the computers in a LAN for backing up files in other computers in the same LAN.
- Used Java RMI to set up a communication link between the computers. Divided the files in chucks to be stored on different machines with given replication degrees. Provided services to backup, delete, restore a file and reclaim local space.

Smartphone Suggest August 2017 - November 2017
Prof. S. R. M. Prassana - IIT Guwahati (Course Project) *Data Analytics*

- Developed a software to suggest a smartphone to a user provided his budget and preferences with prediction based on qualitative review from the current smartphone users.
- Conversion of the qualitative review, gathered by a survey conducted across different colleges in India, to a quantitative number say, preference index and using this number for prediction.

Smart Attendance System January 2019
DevHack Hackathon - IIT Dharwad *Deep Learning*

- Developed a model for detecting faces of the students present in the classroom and marking their attendance.
- Used OpenCV's LBP classifier for detecting faces of students present in the picture. Segmented the detected faces and then used Scale-Recurrent Neural Network for deblurring the cropped faces. Used Siamese Network for one-shot face recognition.

IIT-Dh : Buy and Sell August 2018 - November 2018
Prof. N. L. Sarda - IIT Bombay (Course Project) *DBMS Project*

- Developed a web based platform for college students to buy and sell used goods, hosted on college's intranet with features like posting and deleting an add, messaging to chat with the seller/buyer.

SKILLS

Programming Languages	C++/C, Python, Java, MATLAB
Python Packages	Numpy, Scipy, Matplotlib
ML/DL Tools	TensorFlow, Keras, OpenCV, PyTorch
Web Development	HTML, CSS, BootStrap, Ajax, JavaScript, PHP, MySQL, PostgreSQL
Tools	Jupyter, Spyder, Git, Linux, MacOS

COURSEWORK

Computer Science	Statistical Pattern Recognition*, RL, Introduction to AI	(*Ongoing Courses)
	Distributed Systems, Introduction to ANN and DL	
	Computer Programming, Data Structure and Algorithms, DBMS	
	Design & Analysis of Algorithms, Discrete Mathematics, Theory of Computation	
	Computer Architecture, Operating Systems	
Mathematics	Calculus, Linear Algebra, Data Analytics, Number Theory, Probability	
MOOC's	Machine Learning, Specialization in Deep Learning	(Coursera, Andrew Ng)

ACHIEVEMENTS

Gold Medal at IoT Workshop organized by Robocart and IIT Bombay e-cell at IIIT-Dharwad	September 2016
Smart India Hackathon (Software Chapter) Final Event	March 2019
Successfully completed Hacktoberfest 2019	October 2019

POSITION OF RESPONSIBILITY

Organizer : Workshop on Machine Learning & Deep Learning - IIT Dharwad August 2018

Lab Assistant : Physics Lab - IIT Dharwad January 2018 - April 2018

Volunteer : Workshop on Applied Deep Learning (WADL) - IIT Mandi July 2019