Pulkit Kumar

e-mail : pulkitkumar95@gmail.com
webpage : pulkitkumar95.github.io

Education

Netaji Subhas Institute of Technology, University of Delhi Aug 2013 - May 2017
B. E. in Information Technology
First Class with Distinction (CGPA: 8.26)

Employment

Paralleldots, Inc.
Senior Data Scientist Nov 2018 -
Data Scientist Jun 2017 - Oct 2018
Data Science Intern Jun 2015 - Jun 2017
Developing machine learning and deep learning models in multiple domains like NLP, computer vision and speech recognition and applying them in sectors of market research and healthcare.

Indrprastha Institute of Information Technology May 2017 -
Research Associate
Exploring computational models to segment brain MRI and detecting bone marrow cancer (Myeloma) from microscopic images of white blood cells. (With Dr Anubha Gupta)

Conference Papers

U-Segnet: Fully convolutional neural network based automated brain tissue segmentation tool
P. Kumar, P. Nagar, C. Arora, A. Gupta
International Conference on Image Processing (ICIP), 2018

Boosted Cascaded Convnets for Multi-label Classification of Thoracic Diseases
P. Kumar,* M. Grewal*, M.M. Srivastava
International Conference Image Analysis and Recognition (ICIAR), 2018

RADnet: Radiologist level accuracy using deep learning for haemorrhage detection in CT scans
M. Grewal, M.M. Srivastava, *P. Kumar**, S. Varadarajan*
International Symposium of Biomedical Imaging (ISBI), 2018

Anatomical labeling of brain CT scan using multi-context nearest neighbor relation networks
S. Varadarajan, M.M. Srivastava, M. Grewal*, *P. Kumar**
Poster in International Symposium of Biomedical Imaging (ISBI), 2018

A Big Data Analysis Framework Using Apache Spark and Deep Learning
A. Gupta, H. Thakur, R. Shrivastava, *P. Kumar,* S. Nag
International Conference of Data Mining (ICDM) workshop on DSDBA , 2017

Preprints

LeukoNet: DCT-based CNN architecture for classification of normal vs Leukemic blasts in B-ALL Cancer
S. Mourya*, S. Kant*, *P. Kumar**, A. Gupta, R. Gupta
Under review

Additional Projects

LeukoGAN: A dual representative adversarial network for cancer cell nuclei classification
Experimenting with bio-inspired GAN to generate synthetic images of cells to improve classification.

Keyword spotting and speaker diarization in active speech conversation
Using prototypes of keywords and speakers from prototypical networks for their detection in audio.

Deduplication of large image dataset
Caught duplicate images by detecting key points and pair-wise matching them by extracting the point's descriptors from a pre-trained network.

SmartGaze: Analysing eye tracking videos to detect hotspots.
Used patch based template matching technique to gather insights as to where a user tends to focus while shopping in a retail store and in a mobile application.

Detection of Tooth Caries from Bitewing Radiographs
Experimented with LSTM based approach to detect dental caries from an X-Ray.

Skin Lesion Analysis towards Melanoma Detection
Tested out various architectures using CNNs and autoencoders to detect skin cancer (Melanoma) from microscopic images.

Machine Learning Classifier for App User's Intent and News headlines
Used machine learning tools like XGBoost and SVMs with statistical methods to classify user reviews and news headlines.