AKSHAY SETHI

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EDUCATION

Indraprastha Institute of Information Technology, Delhi *August 2014 - April 2018(Expected)*
B.Tech in Electronics and Communication & Engineering
Minor in Artificial Intelligence
Overall GPA: 8.87/10

RELEVANT COURSEWORK

Artificial Intelligence, Advanced Machine Learning, Machine learning, Deep Learning
Computer Vision, Image Analysis, Robotics, Compressive Sensing, Data Structures and Algorithms

TECHNICAL SKILLS

Expertise Area	Deep Learning, Machine Learning, Computer Vision
Programming Languages	Python, Java, C++, C, Matlab
Deep Learning Libraries	Keras, Pytorch, Tensorflow, Caffe
Libraries	Scikit-learn, OpenCV, NLTK, Numpy, Flask
Tools	Eclipse, Code-Blocks, Android Studio, Sublime Text

EXPERIENCE

IBM Research May 2017 - July 2017
Research Internship *Bangalore, India*

- Worked on the DARVIZ Deep Learning platform.
- Implemented a feature which converts Deep Learning research papers to associated code in libraries like Keras, Theano and Tensorflow.
- Wrote a PDF Ingestion Engine in Python.
- Two Papers Accepted in AAAI'18 and one in CODS-COMAD'18.

IIIT-Delhi May 2016 - July 2016
Research Internship *New Delhi, India*

- Worked on Medical Image Analysis using Deep Learning Techniques.
- Used Sparse Stacked Autoencoder for purpose of automated Segmentation of Basal Ganglia region in Brain MRI scans.
- Paper accepted in ICVGIP'16.

Cube 26 Software March 2016 - April 2016
Data Science Internship *New Delhi, India*

- Worked on Monaural Speech Separation using Deep Neural Networks.
- Preprocessed Data using STFT and used the Deep Network for the prediction of Background and Foreground Masks.

PUBLICATIONS

· Residual Codean Autoencoder for Facial Attribute Analysis
Pattern Recognition Letters, 2018
Akshay Sethi, Maneet Singh, Richa Singh, Mayank Vatsa

· DLPaper2Code: Auto-generation of Code from Deep Learning Research Papers
AAAI Conference on Artificial Intelligence (AAAI), 2018
Akshay Sethi, Anush Sankaran, Naveen Panwar, Shreya Khare, Senthil Mani

· DARVIZ : A Visually IDE to build Deep Learning Models
AAAI Conference on Artificial Intelligence (AAAI) Demo Track, 2018
Anush Sankaran, Naveen Panwar, Shreya Khare, Senthil Mani, **Akshay Sethi**, Rahul Aralikatte, Neelamadhav Gantayat

· DARVIZ: A Visual IDE to build Deep Learning Models
The ACM India Joint International Conference on Data Science and Management of Data (CoDS-COMAD) Demo Track, 2018
Shreya Khare, Naveen Panwar, **Akshay Sethi**, Anush Sankaran, Senthil Mani, Rahul Aralikatte, Neelamadhav Gantayat

· Deep Neural Networks for Segmentation of Basal Ganglia substructures in Brain MR Images
The Indian Conference on Computer Vision, Graphics and Image Processing (ICVGIP), 2016
Akshay Sethi, Ayush Agarwal, Akshat Sinha, Chetan Arora, Anubha Gupta

SELECTED PROJECTS

· **Sub-Class Generative Adversarial Networks**
Guide: Dr. Mayank Vatsa and Dr. Richa Singh
Work on state of the art image generation Generative Adversarial Network models exploiting subclass information present in datasets like CIFAR100 and Adience.

· **Neural Architecture Search**
Guide : Dr.Mayank Vatsa
Worked on data-depend prediction of Neural Architecture using RNNs, Evolutionary algorithms and Reinforcement learning.

· **Facial Attribute Guided Image Generation**
Guide : Dr.Richa Singh
Worked on Image generation using GANs conditioned on various facial attributes like Smile, Age etc. with the identity preserving constraint.

· **Multi-Label Classification**
Guide : Dr.Angshul Majumdar
Worked on Multi-Label Classification using sparse representation learning and dictionary learning based methods.

· **Fine Level Classification in Images**
Guide : Dr.Chetan Arora

Worked on Fine level classification of clothing items such as Shoes using various Deep Learning techniques.

- **Deep Reinforcement Learning**
  Guide : Dr.Saket Anand and Dr.Anubha Gupta
  Worked on AI agents for playing popular mobile games such as Flappy Birds and Pong using Deep Q learning and policy gradients.

- **Face Recognition in Indian Celebrities**
  Guide : Dr. Chetan Arora and Dr.Saket Anand
  Worked on Image recognition of various Indian Celebrities using CNNs and various other neural networks.

- **Image Super-Resolution and Neural Style**
  Guide: Dr. A. V. Subramanyam
  Worked on Image Super-Resolution and Neural Style Transfer(Prisma) using Deep CNNs.Used VGG-16 as the base network for the style transfer.

- **Deep Learning for Self Driving Cars**
  Guide: Dr. P B Sujit
  Worked on Driving Cars autonomously using the Udacity simulator using CNNs. Achived a stable autonomous driving agent using truncated VGG network with data augmentation.

REFERENCES

Dr.Mayank Vatsa (IIIT-Delhi)
Dr.Richa Singh (IIIT-Delhi)
Senthil Mani (IBM-Research)