

# Noushad Puthen Peedikayil

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## OBJECTIVE

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Experienced full stack developer excellent at juggling multiple tasks & working under pressure. Broad industry experience with extensive exposure to startup environments. 6+ years of professional expertise with strong leadership & relationship-building skills.

## WORK EXPERIENCE

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### German Center for Neurodegenerative Diseases (DZNE)

Bonn, Germany

Research Assistant, Image Analysis Group

2018–2020

- Led the development of optimized 3D CNN blocks for full-volume neuroanatomical segmentation through efficient reparameterization
- Developed architectures for optimized memory-usage during training to promote model reusability in semantic segmentation in medical imaging

### Jadavpur University

Kolkata, India

Junior Research Fellow, Dept. of Computer Science & Engg.

2016–2017

- Applied recurrent neural networks and classical time series analysis algorithms to the problem of appliance energy usage prediction
- Implemented distributed gradient descent algorithms by developing a PySpark wrapper for a Keras and Flask framework

### Indian Statistical Institute

Kolkata, India

Project Trainee (Intern), Computer Vision and Pattern Recognition Unit

2015–2016

- Developed supervised-layerwise deep CNNs for document classification on limited data

## SKILLS

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### Technical Proficiency

- **Proficient:** Python, NumPy, Scikit-Learn, PyTorch, Git, L<sup>A</sup>T<sub>E</sub>X, Matplotlib
- **Familiar:** Linux (Usage and Shell Scripting), C, SciPy, R, SQL, Apache Spark, Matlab, Keras, Pandas, Docker

### Relevant Courses

- Machine Learning, Technical Neural Networks, Data Science & Big Data, Distributed Big Data Analytics, Data Analytics and Visualization, Knowledge Graph Analysis, Deep Learning for Visual Recognition, Pattern Recognition, Deep Learning on GPUs, Advanced Deep Learning for Graphics

## EDUCATION

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### University of Kannur

Govt Eng College, Wayanad

Bachelor of Technology, Computer Science and Engineering

2010–2014

- *Thesis:*

## PUBLICATIONS (SELECTED)

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SCHOLAR\_LOGO\_

- A. Das, **S. Roy**, U. Bhattacharya, S.K. Parui, “Document Image Classification with Intra-Domain Transfer Learning and Stacked Generalization of Deep Convolutional Neural Networks,” *24<sup>th</sup> International Conference on Pattern Recognition (ICPR)*, Beijing, China, 2018.
- **S. Roy**, N. Das, M. Kundu, M. Nasipuri, “Handwritten Isolated Bangla Compound Character Recognition: A new benchmark using a novel deep learning approach,” *Pattern Recognition Letters, Elsevier*, Vol. 90, pp.15-21, 2017.

- **S. Roy**, A. Das, U. Bhattacharya, “Generalized Stacking of Layerwise-trained Deep Convolutional Neural Networks for Document Image Classification,” *23<sup>rd</sup> International Conference on Pattern Recognition (ICPR)*, Cancun, Mexico, 2016.

## PROJECTS

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▣GITHUB\_LOGO

- Implementation of **Autoencoders**, **GANs** (Advanced Deep Learning course)
- **Deep CNNs** for Humanoid Robot Part Detection and Localization (Vision Systems lab)
- Implementation of **Logistic Regression**, **MLPs**, **CNNs**, **VGGNets**, **ResNets**, **LSTMs**, **GRUs**, **Transfer Learning** based Nets (Vision Systems lab)
- Scalable Evolutionary Algorithm for Association Rule Mining from Ontological Knowledge Bases using Apache Spark (Distributed Big Data lab)
- **Deep Convolutional GAN** retraining on ImageNet-1k (Deep Learning lecture assignment)
- Implementation of **Decision Trees and Rules**, **NN Classifiers**, **Ridge Regression** (Machine Learning course)
- **Deep CNN-LSTM** Networks for Electric Load and Wind Power Forecasting
- Supervised Layerwise training of **Deep CNNs** for Character and Document Recognition

## PROFESSIONAL SERVICE

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- Reviewer (Selected): *ICPR* (2018), *Language Resources and Evaluation*, Springer (2018), *Sadhana*, Springer (2019, 2020), *IEEE Access* (2019), *IET Information Security* (2020)

## MISCELLEANEOUS

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- GATE Scholarship (2013–2015) for Postgraduate Studies, Govt. of India.
- Erasmus Mundus FUSION Scholarship for PhD mobility between Jadavpur University, India and University of Evora, Portugal (Did not accept offer)