Vikrant Kumar Saini

Strong engineering professional with a Master Degree focused in Computer Science from Indian Institute of Technology, Roorkee. Experienced Research and Development Engineer skilled in Machine Learning, Deep Learning, Image Processing, Data Structure & Algorithm Design and Python.

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Experience

Associate projects, Cognizant Technology Solution Pvt. Ltd., Hyderabad, India
(July, 2017 to present)

Areas of Interest

Machine Learning, Deep Learning, Image Processing, Reinforcement Learning.

Education

Degree	Major	Institute/Board	CGPA/Percentage
M. Tech	Computer Science and Engineering	Indian Institute of Technology, Roorkee	8.596
B. Tech	Computer Science and Engineering	Uttar Pradesh Technical University, Lucknow	72.16 %
Intermediate	PCM	UP Board Allahabad	83.80 %
High School	Science	UP Board Allahabad	76.67 %

Skills

Programming Languages	Python, Core java
Deep Learning Framework	Tensorflow, Keras
Deep Learning Network	Autoencoders, capsule network
Deep learning Packages	NLTK, Scikit-Learn, Matplotlib, Spacy, Pdfminer, Opencv,Gensim
Tools	Tensorboard, Spyder, Jupyter,Matlab, MySql

Projects

Generating Special characters using Generative Adversial Network (GAN) | Cognizant Technology Solution

An actor-critic model has been developed to generate special characters in a large number given a few examples of each special Character. Model is trying to learn the probabilistic distribution of given samples and generate the unseen examples of special characters.
Tools and Technologies: Python, Keras, Matplotlib

Good and Bad Image discriminator | Cognizant Technology Solution

A discriminator model has been developed to identify a document image whether it is readable by OCR (termed as Good) or not (termed as Bad). Model is used to give time efficient solution in term of distinguish corrupted document image from the good one.
Tools and Technologies: Spacy, Keras, Opencv, Python, Matplotlib

Intelligent Character Recognition (ICR) | Cognizant Technology Solution

A model has been developed to process forms like structure and identify the handwritten words in it. Problem is tackled in two ways: constraint form (separated letters) and unconstraint form (free form). Model is giving 88% accuracy over constraint forms. In unconstraint, we have used LSTM – CTC architecture with the accuracy of 73 %.

Tools and Technologies: Python, Keras, Spacy, Matplotlib, Opencv

Document Object classification and Localization | Cognizant Technology Solution

A deep neural model has been developed to identify the objects in the document images and localize them such as Paragraph, Heading, Table, Image etc, You Look only Once (YOLO) algorithm is used to design the model.

Tools and Technologies: Python, Keras, Matplotlib, Opencv

Topic modeling | Cognizant Technology Solution

A model has been developed to find out the hidden topics present in the document (GSD raised by employee) in a dataset of IT related query.

Tools and Technologies: Python, Java, Opencv, PdfMiner, Pyocr.

Kaggle competitions

1. Participated in the competition of '*House Prices: Advanced Regression Techniques'*

Certification

Neural Networks and Deep Learning	Coursera
Improving Deep Neural Networks: Hyperparameter tuning, Regularization, Optimization	Coursera
Structuring Machine Learning Projects	Coursera
Convolution Neural Networks	Coursera
Sequence Models	Coursera

Achievements/Scholarship

- Gate 2014 - AIR 1150
- Gate 2015 - AIR 556
- Gate 2016 - AIR 676
- CSIR-UGC-Net AIR 122
- JEST 2015 - AIR 66

Research Publication

Vikrant Kumar Saini, Amitesh Rajput, R. Balasubramanian,"*Robust image sharing using one dimensional chaotic logistic map*", CVIP 2017, SPRINGER

References

Professor R. Balasubramanian
Department of Computer Science and Engineering, IIT Roorkee
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