RAGHUL ASOKAN

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WORK EXPERIENCE

Infilect   Bengaluru, India
Deep Learning Engineer   December 2018 | Present

- Training and deployment of object detection models for Retail shelf image parsing. Architectures: SSD, RetinaNet.
- Fine grained image classification, 2D Image Correspondence/Feature Matching.
- Deployed text detection models(arabic and japanese) for Analysis of retail point-of-sale materials. Architecture: Densebox(EAST).
- Employed self-supervised learning techniques to tackle data scarcity problem and produce high accuracy models.

Zoho Corporation   Chennai, India
Deep Learning Engineer at ZLabs   June 2016 | November 2018

- Developed end-to-end Optical Character Recognition(OCR) Pipeline for Zoho Expense - an online Expense Report Software.
- Training and productionization of deep learning models for Text recognition. Architectures: CNN + BLSTM + CTC, CNN + CTC(Rosetta), SWA: 0.85
- Synthetic data generation.
- Built data annotation tool for Text recognition.

PROJECTS(*https://github.com/mailcorahul/deep_learning*)

Neural Style Transfer
PyTorch implementation of the paper "A Neural Algorithm of Artistic Style by Gatys et. al".

Image Super-Resolution

- PyTorch implementation of the paper "Image Super-Resolution Using Deep Convolutional Networks" for enhancing the quality of word images used for OCR Word Recognition.
- Dataset used: Synthetically generated receipt word images.
- Accuracy - Average PSNR: 19.92 dB

Other Computer Vision Projects(*https://github.com/mailcorahul/computer_vision*)

- e-Commerce Product Duplicate Detection using Siamese Neural Networks(One shot learning).
- Text Detection using Maximally Stable Extremal Regions with increased recall and performance.
- Boundary Detection in Receipts using Structured Forests and Hough Line Transform.

EDUCATION

Anna University(SSNCE)   Chennai, India
Bachelor's in Computer Science *GPA: 8.6*   Aug 2012 - May 2016

SKILLS

Programming Languages:	Python, C, C++, Java
Deep Learning:	Numpy, OpenCV, PyTorch, Keras
Web:	HTML, CSS, Javascript, jQuery, Apache Tomcat, CherryPy
Platforms:	Linux, Windows

OTHER ACTIVITIES

- Blogger on Medium - Towards Data Science.
- Active user in PyTorch forums.
- Speaker at AI and Data Science Day 2019 - Bangalore, presented a session on "A deep evolution of text detection & text recognition on natural scenes".
- Secured third place in Zia Hackathon 2018 - A Machine Learning Hackathon held at Zoho Corporation.