conferenceseries.com

5ᵀᴴ World Machine Learning and Deep Learning Congress
and
World Congress on
Computer Science, Machine Learning and Big Data

August 30-31, 2018   Dubai, UAE

An overview of deep learning based object detection techniques in retail domain

Rohit Agarwal and Gaurav Pawar
Mobisy Technologies Pvt. Ltd., India

We have used image recognition and machine learning technology to automate some of the time consuming and error prone auditing use cases pertinent for SME retail stores (aka mom-n-pop stores) like which all SKU type are present in particular store. Check if the store has put out advertising of the brand as was agreed upon. Current process of store auditing is conducted through feet on street sales force/external auditing agencies which is manual, biased, time consuming, costly affair and is not scalable. Leveraging the state of art deep learning image recognition technology, our platform helps in automating store auditing process by acting as eyes for tracking all types of in-store visibility executions like window displays, POS material and outdoor advertising/banners with high degree of precision (>90%) which is much better than classical approached like SVM (~80%). The platform can analyze millions of retail store images to generate actionable insights for brands/company. Role of the sales force is limited to take pictures of the stores and upload them to our platform. Most of the current image analytics platform works with high quality images of organized environment like supermarkets, this makes our platform different as it has been specifically designed for mom-n-pop store setup which symbolizes unorganized shelves and cluttered environment. The images obtained are also low quality as they are typically shot by sales force using low quality mobile camera. Some of the common issues with these images are low light, partial visibility, occlusion, glare, incorrect angle, etc. In this, we intend to give a technical overview of the platform, highlight its capability to analyze images of varying nature, showcase few use cases in SME domain that can be implemented using this platform.

Biography

Rohit Agarwal is working as a Data Scientist in Mobisy Technologies Pvt. Ltd., Bangalore where he leads a team of data scientists and software engineers, focusing on sales force automation by applying state of the art ML and deep learning techniques. He has 12 years of industry experience with 11 years in GE where he worked on conceptualizing, designing, prototyping a number of software and data solutions using cutting edge technologies for solving large industrial problems. He has completed his asters in IT from IIIT, Bangalore and Bachelors in Computer Science from IET, Lucknow.

rohit@bizom.in

Gaurav Pawar has completed his BE degree in Electronics and Telecommunication with more than 3 years of practical hands-on experience in computer vision and machine learning. He is specialized in building quick prototypes using python environment by leveraging GPU platform. He has expertise in using popular deep learning libraries such as TensorFlow, PyTorch and Keras. Currently, he is interested in solving data science problems in Indian retail industry using images and other source of data.

gaurav@bizom.in

Notes: