Vishal Kumar Gupta

Associate Consultant - Infosys

Summary of Experience

- 3.4 years of Experience at Infosys
- Knows Artificial Intelligence[NLP, ML, DL] and Data Analytics with Python
- AI, Data Analytics and Finance are his fascinations.

CV

- Vishal did his B.Tech. in Computer Science & Engineering from National Institute of Technology Delhi in 2015. CGPA: 7.6/10
- Vishal played Table Tennis and Cricket for the college teams; and TT, Badminton, and Chess for the branch (CSE) teams. He was TT Caption & Coordinator and, a member of the Sports Committee. He plays football and tennis also.
- He won four intra-college non-sports competitions – 3D Model Building, IQ & Puzzles, Sketching, and Humor Acting.

- Vishal joined Infosys in July 2015.
- Designations at Infosys
  JUL-15 TO DEC-15 - Systems Engineer Trainee
  JAN-16 TO MAR-17 - Systems Engineer[JL-3B]
  APR-17 TO SEP-17 - Associate Business Analyst[JL-3A]
  OCT-17 TO PRESENT - Associate Consultant[JL-4B]

- Current Rank on Analytics Vidhya: 1185.
- Was awarded 'Caption America' title for being the top individual performer in XPO Logistics Hackathon (biggest [intra-Infosys, inter-Development Centre] annual hackathon).
- Vishal has been awarded *Insta* Award for building Machine Learning applications. He has been nominated for Tech Champ Award for helping the teams.

Project Experience

- AutoML Tool – for Automatic and Customized Prediction Models (for reression and classification), Visualization and Reporting – for various (structured) datasets – using Pandas, SciKit-learn, Keras, CatBoost, LGBM, XGBoost, Matplotlib, SeaPlot, Numpy.

- Text Recognition – using Tesseract OCR engine, *PyTesseract*, *TesserOCR* – Image preprocessing/enhancement using *OpenCV*, get text and location, put it in a text file, and PDF while retaining spacing
- Image Comparator - Finding the difference in two images – Compare pixel values, cluster nearby ones, for each cluster draw a bounding box. Used NumPy for faster computations.
- Image Generator - Using *ImgAug* and *Keras* to add a set of bucketed distortions to create many images from an image
- Identifying objects in an image/video/live streaming - Localizing and recognizing objects using TensorFlow Object Detection API. Implemented my own *R-CNN, Fast R-CNN, Faster R-CNN, Mask R-CNN* partially.
- Face Detection – *OpenCV*(Face Detection) and CNN for classification. CNN for Image(UI Element) classification, and text(error log) classification.
- Finding loop/s in a video – to check if any part of the video repeats. Videos are a set of images. Loops are consecutive repeating images at a constant interval. Using *NumPy* for faster computations. Also used *OpenCV.*
- Match Highlights Auto-Compilation - Using audio level to find highlight-like (very noisy or extreme silence) events in a video, clipping such portions and combining.
- Testing contents (for a given video and its brief description) of a TV program – Taking random images at regular intervals, sending to Google Image Search API, comparing the received info with the given metadata/description [Text Similarity]
- Speech Recognition (Speech To Text) - Using *Google's Speech Recognition API* (Paid) and Mozilla's *DeepSpeech* (Open Source) which works offline as well.
- Speech Synthesis - Using *Web Speech API, and eSpeak*
- Text Sentiment Analysis. Voice Sentiment Analysis (not by converting into text) - Using *PyAudioAnalysis.*
- Attempted a mini version of *CMU NELL* project. Mentored college undergraduate interns do this partially as their final graduation project.
- Finding Ambiguous Sentences using missing arguments of verbs in the sentences using *DaisyLu* and *DeepSRL* on *CoreNLP*.
- Contents Mapping – Using Keyphrase extraction using *CoreNLP* and then calculating similarity using *Gensim WMD.*
- Used Natural Language Processing in our existing tool at a few other parts. Libraries used: *SpaCy, NLTK, Stanford CoreNLP, TextBlob, Gensim.*

- Finance Domain - maintenance of Infosys Risk & Compliance (*RnC*) portal, review of white papers, and creation of financial domain training materials. Research presentations titled "UK Ring Fencing Regulation in Banking", and "Top Regulatory Trends in Consumer Banking"

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