VINAY KALE

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EDUCATION

Columbia University — New York, NY
M.S. in Data Science, GPA: 3.75/4 — Expected Dec 2018

- Relevant Coursework: Neural Network & Deep Learning, Algorithms, Probability Theory, Statistical Inference and Modeling, Machine Learning, Computer Systems, Natural Language Processing

Indian Institute of Technology Madras — Chennai, INDIA
B.Tech. in Mechanical Engineering, M.Tech. in Product Design, GPA: 8.12/10 — June 2016

TECHNICAL SKILLS

Programming Languages: Python, R, Caffe, PyTorch, Java, C, C++, SQL, MATLAB, LaTeX, Mapreduce, Spark
Tools and Technologies: Tensorflow, Keras, Git, Tableau, RShiny, Amazon EC2, OpenCV, CUDA, MS Office

PROFESSIONAL EXPERIENCE

ZS Associates — Pune, INDIA
Data Science Associate — June 2016–July 2017

- Built a novice AI Doctor using patient vector embeddings (similar to Word2Vec) trained on sequential big EHR (electronic health records) data. This addresses multiple questions in PLD (patient level data) space where patient level classification set in different contexts is often sought after [**Python, SQL, Tensorflow, AWS**]
- Spearheaded the development of dashboard to find KOLs (key opinion leaders) in social media space (ex. Twitter) for any particular brand where influence is decided by relevant tweets and their content distribution found by topic modeling **[Python, NLTK, NetworkX, Gephi]**
- Created a marketing-mix based spend analyzer data pipeline which calculates impacts of different marketing campaigns employed using regression based models with elastic net regularization **[R, SQL, Tableau]**

Columbia University — New York, USA
Graduate Course Assistant — Jan 2018–Present

- Teaching Assistant for COMS 4995 Applied Machine Learning under Prof. Andreas Mueller
- Coursework supervision including Git, Continuous Integration (Travis, Jenkins), Scikit-Learn and Keras modules

PROJECTS

Autonomous Car Driving and City Navigation (Computer Vision) — New York, NY
Research under Prof. Zoran Kostic — Jan 2018–Present

- Modelling pedestrian-vehicular interactions at traffic intersections, in real-time using R-CNNs (part of Columbia team participating in Nvidia AI City Challenge)
- Used YOLOv2 for object detection and social-LSTM for trajectory prediction. **[Tensorflow, Keras]**

Adaptation of Neural Algorithm of Artistic Style (Computer Vision) — New York, NY
Neural Network & Deep Learning Course Project — Sep 2017–Present

- Fused the artistic style of an artwork with content of an image using CNNs by maximizing the correlation between the generated image and feature map of VGG-19 net layers. Improved on it by segmentation and videos **[Python]**

COMPETITIONS

Runners Up: Columbia Data Science Society (CDSS) Hackathon 2017 (42 teams) — Sep 2017

- Collaborated in a team of 4 to analyze Enron email corpus to find fraudulent behavior
- Used two-pronged approach of Network Analysis and NLP (Semantic Analysis + Topic Modelling)

Winner: QUIKR Hackathon 2015 (70 teams) — Oct 2015

- Developed a web based app in a team of 2 which suggests optimal keywords to customers to increase ad views on their ads, considering the region and product being dealt with on the Quikr (online classifieds) website

Silver Medal: TFI Restaurant Revenue Prediction (Kaggle Challenge) — Feb 2015

- Placed 78th out of 2257 (Top 4% on private leaderboard) for proposing ensemble solution (Random Forest + XGBoost) to predict annual restaurant sales and find the drivers of the investments in a new restaurant site.