Amey Porobo Dharwadker

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Education

Columbia University, New York, United States — Sep 2013 - Dec 2014
M.S., Electrical Engineering (GPA: 4.0/4.0)

- Specialization: Computer Vision, Machine Learning

National Institute of Technology, Tiruchirappalli, India — Jul 2007 – May 2011
B.Tech, Electronics and Communication Engineering (GPA: 8.54/10.0)

- Degree Honors : First Class with Distinction
- Thesis : Scene Text Extraction Using Color Information

Work Experience

Facebook Inc., California, United States — Jan 2015 – Present
Software Engineer

- I work on App Event Optimization ranking model that enables mobile app advertisers to connect to users who are most likely to take valuable actions within their apps beyond the install. I've driven this project from problem definition stage, built end-to-end machine learning pipelines, worked on data analysis, feature engineering, and training prediction models. My contributions have significantly improved ads CTR and conversions and led to increase in top-line ads revenue.
- Previously, I worked on Facebook News Feed recommendations and ranking. I was responsible for user modeling and personalization in video and link feed recommender systems. I developed features and built retrieval and ranking prediction models that captured hidden relations in user and content data. These recommendations led to increased user connections and improved user engagement. Our work was featured on Slate magazine: http://slate.me/1MOCM4q
- I have presented our work internally and in industry-wide Representation Learning Summit 2016 and Machine Learning Summit 2017 organized by Facebook.

Facebook Inc., California, United States — May 2014 – Jul 2014
Software Engineering Intern

- Worked on understanding how users interact with Facebook ads and further optimizing content ads relevance and retrieval.

Analog Devices Inc., Bangalore, India — Jul 2011 – Jun 2013
Automotive Vision Software Engineer

- Developed real-time vision based Advanced Driver Assistance System (ADAS) algorithms for proprietary ADSP-BF609 embedded processor.
- Researched, designed and implemented the algorithms including input data-analysis, OpenCV and MATLAB simulations and a final implementation which featured a hardware-accelerated video analytics pipeline.

Patents

Embeddings for Feed and Pages
US Patent Pending

- This disclosure relates to determining feature vectors for entities in an online system using entity co-engagement and applying it to serve content recommendations to users of an online system.

Academic Projects

Large-scale Action Recognition in Videos — Oct 2013 – Jan 2014
Advanced Research Project

- Extracted dense trajectory features (HOG, HOF, MBH) for human action recognition in videos captured in realistic unconstrained environments.
- Proposed spatio-temporal covariance descriptors on the computed dense trajectories to fuse correlated features and create a low-dimensional feature representation.

Predicting Visual Aesthetics in Face Photos Dec 2013
Biometrics Course Project

- Utilized photographic compositional features and rules to develop an algorithmic approach to quantify aesthetic quality of photos containing faces.
- Built SVM classifiers to score face photos similar to human aesthetics judgement predictions.

Text Detection in Natural Scene Images May 2010 – Jul 2010
UGC funded Research Internship

- Developed algorithms to segment foreground text from word images in the ICDAR 2003 Robust Reading Competition Word Dataset.
- Proposed algorithms for localizing text regions in natural scene images from the ICDAR 2003 Dataset.

Skills

Backend: C++/C, Python
Databases: Hadoop, Hive, MySQL
Other: PHP, OpenCV, MATLAB, Mathematica

Publications

Abhishek Sharma, **Amey Dharwadker**, and T. Kasar. "MobLP: A CC-based approach to vehicle license plate number segmentation from images acquired with a mobile phone camera." *Annual IEEE India Conference (INDICON), 2010.* [pdf]

T. Kasar, A.G. Ramakrishnan, **Amey Dharwadker**, Abhishek Sharma. "TexTraCC : Text extraction using color-based connected component labeling." *The Centenary Conference, Electrical Engineering, Indian Institute of Science, 2011.* [pdf]

Honors and Awards

Ranked among top participants in Numerai contests, a global crowdsourced hedge fund tournament to solve the stock market as a data science problem
Ranked 214th in HackerRank CodeSprint 5 among 4000+ participants across the world
Among 72 students selected worldwide for the Season of KDE 2011 internship program
Received University Grants Commission (Government of India) Summer Research Fellowship 2010
Among National Top 1% (250 students) selected in the Indian National Physics Olympiad 2007
Awarded Gold Merit Certificate in the 6th National Cyber Olympiad 2007