SANDEEP VANGA

355 Serrano Drive San Francisco CA 941321 ✆ +1(415)9262854 ✉ reddys102@gmail.com LinkedIn

SUMMARY

Software professional with six years of experience in product and algorithmic development in the allied fields of signal/image/video analytics, computer vision, applied machine learning and chemometrics

EDUCATION

Master of Science in Analytics **Jul 2014 – Present**
University of SanFrancisco, San Francisco, CA, GPA: 4.0

Master of Engineering in System Science and Automation **Aug 2006 – Jul 2008**
Indian Institute of Science, Bangalore
Thesis: Soccer Video Analytics and Semantics Extraction

PROFESSIONAL EXPERIENCE

Technical Lead, Apr 2013 to Jun 2014 **Samsung R&D Institute, Bangalore**
- 3D location identification of finger/stylus for capacitive proximity Sensors in handheld devices using data driven approaches such as GMM, LDA, regression analysis
- Feature engineering for wet touch classification

Lead Engineer, Apr 2012 to Mar 2013 **Samsung R&D Institute, Bangalore**
- Classification and feature extraction of finger/stylus for single ended capacitive touch sensing
- Noise suppression for single and differential capacitive touch sensing using Kalman filter
- 2D location identification of 1phi (1mm radius) stylus for capacitive touch sensing using decision trees

Chemometrics Consultant, Oct 2012 – Apr 2014 **Laser Spectroscopy Group, IISc, Bangalore**
- Classification of Raman spectroscopic signals of muscle disorders using PC-LDA based approach
- Segmentation of Raman image of cancer cells, neurons using K-means, HCA
- Classification of Raman spectroscopic signals of explosives using PCA, decision trees

Senior Product Engineer, Oct 2009 to Apr 2012 **Diginoc Technologies, Bangalore**
- Event detection, mean shift based object tracking in broadcast soccer videos
- Developed customized video player suitable for distributed audio production system
- Design and development of variants of HD audio production system

Research Consultant, Apr 2009 to Sep 2009 **Diginoc Technologies, Bangalore**
- Developed a new background elimination technique based on connected component analysis in the context of broadcast soccer videos

Project Associate, Jan 2009 to Sep 2009 **Computer Vision & AI Lab, IISc, Bangalore**
- Worked on different problems in computer vision such as image/video classification & object detection, human tracking in surveillance videos and text detection on signboards

Software Engineer, Aug 2008 to Dec 2008 **Arcot R&D, Bangalore**
- Developed scripts using AWK, SED and customized web pages for credit unions like ANZ, Unicredit

SKILL SETS

Programming*:* C, R, Matlab, Python, C++, SAS, MySQL, PostgreSQL
Data Visualization Tools: Gephi, NetLogo
Libraries: OpenCV, SDL, ffmpeg, POSIX, ALSA
OS/Kernel debugger Platforms: Linux, Windows, Real View Debugger (RVDS) for ARM

PATENTS & PUBLICATIONS

- A provisional patent is filed for protecting *"semi automatic algorithm to detect important events in the context of broadcast soccer video"*
- A provisional patent is filed for protecting *"a novel algorithm for extracting elliptical features of finger/ stylus for capacitive touch sensing"*
- *"Classification of Myopathies on Molecular Basis in Drosophila using Raman Spectroscopy"*, In Fourth Asian Spectroscopy Conference, Dec 15-18, 2013, NTU, Singapore ([link])
- Disclosure of Invention is submitted to internal patent review committee in Samsung for evaluating *"an algorithm to identify 3D location of finger/stylus (proximity sensing) for capacitive touch sensing"*
- *"Visual Understanding in Still Images"*, Technical survey report submitted to SAIT Labs, Samsung India Software Operations, Sept 2009