Sample Resume

USC Viterbi School of Engineering

Electrical Eddie

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EDUCATION

University of Southern California **Expected May 2017**
Masters in Electrical Engineering, **GPA 3.8/4.0**

VIT University, Vellore, India **May 2015**
Bachelors in Electronics and Instrumentation Engineering
Two-time Awardee of University Merit Scholarship for Academic Excellence

Coursera Certificate: Machine Learning by **Stanford University** on Coursera. **November 8, 2016**

SKILLS

C++, Python, C, MATLAB, OpenCV, Torch, Lua, Caffe, DIGITS by NVIDIA, Lasagne-Theano package, Linux, TensorFlow

WORK EXPERIENCE

Image Processing Co-op, Bedford Medical Inc., Bedford, MA **Jan. 2017 - Present**

- Developing a Deep Learning Architecture for efficient segmentation of clinical features in OCT images using Tensorflow
- Designing a custom network based on well-known architectures such as U-Net, Fully Convolutional Net for image segmentation
- Tuning hyper parameter settings to increase efficiency, and minimize inference time and memory
- Developing verification scripts and post processing algorithms for offline deployment

Summer Research Intern, Taylor Research, Bangalore, India **June 2016 – July 2016**

- Worked on a Deep Learning Approach for Nucleus Segmentation in Cervical Cancer Images
- Implemented *Segmentation by Classification* and *Segmentation using Deconvolution* techniques using DIGITS by NVIDIA
- Designed and trained an architecture based on AlexNet and a 2 stage Deconvolution network for segmentation
- The model was successful in detecting and segmenting unseen nuclei with a PPV of 91% and Jaccard Score of 95%, making it a viable technique for commercial deployment for cancer identification

TECHNICAL PROJECTS

LeNet-5 Design Architecture | Torch | Lua **Nov. 2016**

- Constructed the LeNet-5 Architecture using Torch to classify the MNIST dataset
- Performed extensive parameter analysis of different weight initialization schemes, non-linear activation functions, minimization algorithms
- Achieved a top accuracy of **99.05%** and a mean Average Precision of **0.993**
- Engineered modified LeNet-5 to be robust to Negative MNIST, translated MNIST, and MNIST with complex backgrounds

Bag of Words histogram | OpenCV | C++ **Oct. 2016**

- Extracted SIFT KeyPoints and descriptors of multiple images and clustered to 8 groups using K-means Clustering
- Generated the Bag of Words histogram with 8 bins for each image by computing the intra-group KeyPoint count
- Designed a Nearest Neighbor classifier to classify a new image

Low Cost Gesture Detector | Energia |MATLAB **Oct. 2013 – Jan. 2014**

- Designed and developed an award winning ***Low Cost Gesture Detector*** prototype
- Implemented the *Learning Vector Quantization* algorithm in MATLAB for model training and developed the hardware architecture of the device
- Design published in ***IEEE Xplore*** and awarded **Finalist** at the *Texas Instruments India Educator's Conference 2014* amongst 300 teams in India

LEADERSHIP

- Senator of Ming Hsieh Department of Electrical Engineering at USC representing the Viterbi Graduate Student Association **December 2015 – May 2016**