Jay Priyadarshi

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Links: linkedin.com/in/jaypriyadarshi | github.com/jaypriyadarshi

Education

Expected May 2017	M.S., Computer Science	
	University of Southern California, Los Angeles	GPA: 3.73/4.00
May 2015	B.Tech, Computer Science and Engineering	
	National Institute of Technology Karnataka, India	GPA: 8.93/10.00

Work Experience

May '16 - Current | Student Researcher, **Information Sciences Institute**
Working with Dr. Kevin Knight in the Natural Language Group. Developed a tool to perform unsupervised Optical Character Recognition on images to automatically translate historical ciphers to English. Current project focuses on automatically decoding code language used by people on social media to avoid censorship
Tech stack | **Python, OpenCV, Machine Learning, AI**

Aug '15 - Current | Student Researcher, **iLab at USC**
Working with Dr. Laurent Itti on a project to autonomously detect surprising/unsual events from surveillance videos. Bayesian inference is used on frames to first detect surprising event and then a Convolutional Neural Network is used for modeling appearance to tag entities.
Tech stack | **Python, TensorFlow, Machine Learning, Deep Learning, AI, OpenCV**

May '14 - July '14 | Software Development Intern, **Samsung Research Institute**
Worked on development of an android application for collision avoidance in vehicles. Used Wi-Fi and Bluetooth Low Energy Beacons to transmit GPS data (through smartphones placed inside the car). Estimated the future trajectories of the vehicles in the vicinity using GPS data from beacon signals to calculate the probability of collison.
Tech stack | **Java, Android**

Relevant Projects

- **Neural Network Library** | github.com/jaypriyadarshi/NeuralNet | **Python, Machine Learning**
  - An optimized modular neural network library with fully vectorized implementation using numpy
  - Supports Batch Normalization, Dropout, ReLU, Max pooling, Fully Connected and Convolutional layers
  - Supports Stochastic Gradient Descent (vanilla and momentum), RMSprop and ADAM
  - Includes Softmax and SVM loss functions
  - Trained a Seven Layer Convolution Network, achieved 83.6% accuracy on CIFAR-10 dataset
- **Stock Viewer** | github.com/jaypriyadarshi/Stock_Market_Viewer | **PHP, Ajax, jQuery, Android, CSS**
  - A Web Application to get stock information (current and past) for any company with good data visualizations
  - Stock Data is retreived from a server hosted on AWS
  - Used Highcharts API to visualize the stock data and Bing API to retrieve recent news for the queried company
  - Developed an Android App to serve the above web application functions as a mobile application
- **Poem Generator** | github.com/jaypriyadarshi/Alexa-Skill-for-Poem-generation | **node.js, Alexa Skills Kit**
  - Alexa Skill for Amazon Echo device to generate poetry on demand using Alexa Skills Kit(ASK)
  - The developed node.js script (hosted on AWS Lambda function) makes an API call to retreive generated poem(using Recurrent Neural Net) for a user-requested topic and uses Alexa service to render text to speech
- **Sentimental Analysis using Distributed Representations** | bitbucket.org/jaypriyadarshi/sentiment-analysis | **Python, Machine Learning**
  - Used Word2Vec and Doc2vec features and Logistic Regression as a classifier to perform sentimental analysis of Arabic (Morphologically rich) and Mandarin (less morphology) book reviews
  - Built a crawler for retreiving book reviews from goodreads.com and a n-gram baseline for comparison
  - Achieved 84% and 76% using Word2Vec and 83% and 74% using Doc2Vec on Arabic and Mandarin data

Technical Skills

Programming Languages:	Python, C/C++, Java
Web Technologies:	JavaScript, PHP, Ajax, jQuery, CSS, HTML, django
Others:	Android, Machine learning, Artificial Intelligence