Jay Priyadarshi

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

Education

Expected May 2017	M.S., Computer Science	
	University of Southern California, Los Angeles	GPA: 3.72/4.00
May 2015	B.Tech, Computer Science and Engineering	
	National Institute of Technology Karnataka, India	GPA: 8.93/10.00

Work Experience

June '17 - Current | Research Scientist, **Specifio, Inc.**
Automating the Patent Drafting Process for Attorneys and Agents. Created Docker/Jenkins pipeline for faster deployment.
Tech stack | **Python, Java, Tensorflow, Machine Learning, AI**

May '16 - May '17 | Student Researcher, **Information Sciences Institute**
Worked with Dr. Kevin Knight in the Natural Language Group to perform unsupervised Optical Character Recognition on historical cipher images to aid automatic translation from images to English.
Tech stack | **Python, OpenCV, Machine Learning, AI**

Aug '15 - May '17 | Student Researcher, **iLab at USC**
Worked with Dr. Laurent Itti to autonomously detect surprising/unusual events from surveillance videos and Human Attention Modeling using deep recurrent networks.
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 a collision.
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
- **Human Attention Modeling** | github.com/jaypriyadarshi/AttentionModeling | **Python, Tensorflow**
  - Learning features that attracts attention for 6 neurological groups (CTRL, ALS, AD/MCI, PARKINSON, FTD, VCI) from the Eye Tracker data collected by participants watching video clips
  - Recurrent Neural Network was trained on "What" + "Where" features. "What" features indicate the saliency features from a video frame calculated from the saliency maps. "Where" features indicate the region of the video frame that attracted a participant's attention
- **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

Technical Skills

Programming Languages: Python, C/C++, Java, JavaScript
Others: Tensorflow, NumPy, Docker, Jenkins , Android, Machine learning, Artificial Intelligence

Publications - Google Scholar

- "Perfect Accuracy with Human-in-the-Loop Object Detection",(R. Brenner, J. Priyadarshi, L. Itti),ECCV 2016
- "Hafez: an Interactive Poetry Generation System",(M. Ghazvininejad, X. Shi, J. Priyadarshi, K. Knight),ACL 2017
- "SemEval-2017 Task 9: Abstract Meaning Representation Parsing and Generation",(J. May, J. Priyadarshi),Proc.SemEval 2017

Awards

- Best Demo Paper Award in ACL 2017
- Amazon Alexa Skills Challenge Finalist Award 2017