SANDEEP REDDY KATYPALLY

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AREAS OF SPECIALIZATION

|| Deep Learning, *Machine Learning, Statistical Data analysis, Pattern Recognition, Data Mining* ||

EDUCATION

- ✓ *North Carolina State University, Raleigh* **August 2015 – May 2017**
  M.S. in EE, Computational Intelligence – Major GPA: 3.62/4.0 | GPA: 3.4/4.0
- ✓ *Birla Institute of Technology and Science - Pilani, India* **August 2010 - May 2014**
  B.E. in Electrical and Electronics Engineering

PUBLICATION

- ✓ ***International Journal for Light and Electron Optics, Elsevier*** **September 2015**
  View Invariant Real-Time Gesture Recognition:
  This publication is about activity recognition system I built to identify some complex human gesture activities
  "View Invariant Real-Time Gesture Recognition." Optik-International Journal for Light and Electron Optics.

RELEVANT WORK EXPERIENCE

- ✓ **Amazon Alexa, Boston**
  Machine Learning Scientist Intern: **May 2016 -- August 2016**
  Developed machine learning models on the 'wake word' feature on the voice assistant device Amazon Alexa.
  Tools: Python, PySpark, Scikit-learn
- ✓ **North Carolina State University, Raleigh**
  Human Activity Recognition in an Indoor Environment: **August 2015 -- December 2015**
  Modelled an Activity Recognition System that can recognize day to day activities from the accelerometer sensor data. Implemented statistical modelling methods like *Hidden Markov Models,* and Clustering
  Tools: *Python, MATLAB, Scikit-learn*
- ✓ **Indian Institute of Science, Bangalore, India** **June 2014 -- July 2015**
  *Prediction of Protein Sites in Human Body***:**
  Modeled a prediction system which predicts the protein binding sites in the genetic material. Used classification techniques like *Support Vector Machines*, *Clustering* and *Bayesian Estimation* methods
  Tools: *Python, Scikit-learn, Biopython*
- ✓ **Central Electronic Engineering Research Institute, Pilani, India** **June 2013 -- December 2013**
  *View Invariant Real-Time Gesture Recognition***:**
  Designed a human activity recognition system using Markov models, dimensionality reduction techniques like *Principle Component Analysis* and *Vector Quantization*
  Tools: *C++, Open CV, Kinect API*

RELEVANT SKILL SET

- ✓ **Languages:** Python**,** C++**,** C, Ruby (Prior Experience), Java (Prior Experience)
- ✓ **Tools**: R, MATLAB
- ✓ **Libraries**: NumPy**,** SciPy, Scikit-learn**,** Biopython, Open CV**,** Kinect API

RELEVANT COURSEWORK

- ✓ Pattern Recognition**,** Topics in Data Science, Foundations of Software Science, Applications of Graphs and Graphical Models**,** Machine Learning (Stanford MOOC)**,** Data Mining**,** Probability and Stats, Software Engineering, Design and Analysis of Algorithms, Object-Oriented Design and Development, Mathematical Modeling of Biological Systems.