Abishek Prasanna

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Master's student in Computer Science dept., Rutgers University, New Jersey. Research interests: Representation Learning, Bayesian Neural Nets, Neural Information Retrieval, Web-mining, Unsupervised Generative models.

Education

Rutgers University — **New Jersey, USA**
Master of Science in Computer Science, Machine Learning track, GPA : 3.86/4.00, 21/30 credits — *Aug '17–May '19*

National Institute of Technology Trichy — **Trichy, India**
Bachelor of Technology in Computer Science and Engineering, CGPA : 7.90/10.00 — *Jul '11–Aug '15*

Research Experience

Graduate Research Assistant, Rutgers University — **Aug '18–Dec '18**
Unsupervised generative pre-training for scene understanding with Bayesian Deep Nets

Summer Research Assistant, Rutgers University — **May '18–Aug '18**
Cancelable Biometrics: Learning repeatable non-invertible representations for biometrics privacy

Undergraduate Research Assistant, B.Tech Thesis — **Jan '15–May '15**
Community membership identification using seed set expansion with an adaptive PageRank algorithm

Professional Experience

Samsung Research Institute Bangalore (w./ Samsung SmartThings, USA) — **Bangalore, India**
Intelligence & IOT Division, Senior Software Engineer — *Aug '15–Aug '17*

* Developed embedded driver application for Smart Home Hub enabling mobile surveillance through clips and live stream.
* Decentralized video-processing & security services to reduce latency in live-stream routing from cameras to mobiles.
* Data preparation and modeling Deep Neural nets for NLU in Samsung Bixby Voice interface.
* Analysis and security monitoring of Zigbee traffic during device rejoin with hub.

Samsung Research Institute Bangalore — **Bangalore,India**
Wireless Networks Division, Student Intern — *May '14–Jul '14*

* Surveyed energy consumption in Bluetooth, Bluetooth Smart, and Zigbee on a point-to-point network

Projects

Attend, Infer, Repeat : Fast Scene Understanding, SM Eslami — **Jun '18 – Sep '18**
Paper Impln - Deep Generative model applied to scene understanding on Multi-MNIST dataset

One-Shot summarization with Attention based Seq2Seq encoder-decoder network — **Mar '18–May '18**
French summarization by learning shared representation on Engl. summarization & French translation

Product Recommender system for efficient similarity join with Map-Reduce model. — **Jan '18 – Apr '18**
DIMSUM algorithm on Amazon Products data for fast recommendation based on all-pairs similarity

Metric Learning for Face Recognition with Triplet Loss training, Eigenfaces, Fischerfaces — **Jan '18 – Apr '18**
Pre-trained VGG-19 model fine-tuned for face recognition on LFW & Ext.Yale Dataset

Reinforcement learning arm movements for target reaching tasks with Spiking Neural Nets — **Nov '17–Dec '17**
STDP learning applied to Computational Neuroscience inspired sensorimotor model

Biological Neuron Spike Sorting and Clustering Analysis (Cocktail party problem) — **Oct '17–Dec '17**
Comparison of manifold learning & traditional clustering approaches in distinguishing neuron spikes

Large Scale Spectral Clustering with Landmarks, X Chen — **Oct '17–Dec '17**
Paper Impln. - Family of Spectral Clustering algos & NMF applied to Image Segmentation

Skills

- **Programming Languages:** Proficient in: Python, C, C++
- **Libraries & Toolkits:** PyTorch, Keras, TensorFlow, Numpy, Hadoop, NLTK
- **Languages:** English, Tamil, Malayalam, Hindi

Awards and Honors

- **Best Hack for Good, iCIMS Halloween Hackathon 2018**
  *Built **Inclusive.ai**, a Messenger Chatbot with third party APIs to spread awareness on inclusion in AI research*

- **All India Engineering Entrance Exam 2011**
  *Secured All India Rank **6100** among 110,000 students*

- **Special Merit List, All India Senior Secondary Exams 2009**
  *Placed in the top **0.1%** among all Indian students.*

Extra-curriculars

- **Professionally trained Carnatic/Indian classical singer**
  Performed on TV, Radio, 30+ programs, competitions etc

- **Member of RU Cog Sci Club, Rutgers University**
  Conduct weekly forums to discuss, learn and share ideas in Cognitive Science, Philosophy and Psychology.

- **Co-ordinator of Campus Placement Committee, NIT Trichy**
  Taught algorithms and competitive coding techniques as a personal mentor for a batch of juniors.

- **Secretary of Office of Alumni Relations, NIT Trichy**
  Improved Alumni engagement and organized Bangalore chapter.