Aaditya Prakash (Adi)

iamaaditya.github.io, aprakash@brandeis.edu

Blog, Github, LinkedIn, Twitter

RESEARCH

Current: Visual Memory Networks for transfer learning, Multi-agent GANs

Past : Paraphrase Generation , Applications of Memory Networks in NLP — Advisor: Sadid Hasan

Semantic Image Compression using CNN , Visual Question Answering — Advisor: James Storer

Computational Fact Checking with Retrospection — Advisor: Liuba Shrira

EDUCATION

PhD, Computer Science, Brandeis University. Advisor: Prof. James Storer — expected 2018

MA, Computer Science, Brandeis University. — May 2015

Courses: Algorithms, Distributed Systems, Statistical approaches to NLP — GPA = 4.0/4.0

Computational Semantics, Computational Neuroscience, Information Retrieval

BS, Biomedical Engineering, Bharath University, Chennai, India — 2004-2008

Courses: Calculus(I, II), Complex Analysis, Numerical Methods, Digital Signal Processing — GPA = 9.36/10

Biostatistics, Medical Physics, Medical Imaging Lab, Modeling of Physiological Systems — Rank = 1/71

Completed 24 MOOC courses from Coursera, Udacity, edX, Harvard Business School — Certificates

Machine Learning (Ng), Game Theory, Algorithms, Neural Networks (Hinton), AI (Abbeel)

COMPUTING SKILLS

Languages : C, Python, C++, CUDA, Matlab

Deep Learning : TensorFlow, Keras, Theano, Torch

Research Tools : iPython, SciPy, NumPy, NLTK, OpenCV, Git, LaTeX

Big Data Tools : Hadoop, MapReduce, MongoDB, Mahout, Spark

Code Samples : VQA Keras , Multi-structure ROI Tensorflow , Fallacy Detector Haskell

EXPERIENCE

- Deep Learning Developer (Contract), Spin Master™, Canada — Oct-Dec 2016
  - Designed CNN models for fine grained classification of various toys
  - Developed Android app for classification/detection in real-time
- Research Intern, AI Labs, Philips Research, Cambridge, MA — Summer 2016
  - Explored applications of LSTM in sequence to sequence learning
  - Developed efficient representation of memory state for Memory Networks
- Teaching Assistant, Brandeis University — 2013-current
  - Mobile Application Development
  - Introduction to Big Data Analysis
  - Introduction to Algorithms
  - Data Structures
  - Fundamentals of Artificial Intelligence
  - Scientific Data Processing in MATLAB
  - Theory of Computation
  - Data Compression & Multimedia
- Big Data Analyst, Brandeis University — Summer 2014
  - Researched various new techniques in data analysis on Hadoop and Spark framework.
  - Designed assignments and quizzes for a graduate level course.

- Independent Algorithmic Trading 2010-2012
  - Statistical Arbitrage trades on co-integrated pairs.
  - Designed and formulated low latency strategies on butterfly spread options
  - Designed, developed and coded several algorithmic formulas on a contract basis
- Senior Systems Engineer, Infosys Limited, Pune, India 2009-2013
  - Developed new algorithm to visualize large unstructured datasets
  - Implemented various Machine Learning algorithms on MapReduce and CUDA
  - Analyzed various fault measures in distributed optimization problems
  - Debug and support of Banking Software implemented across major banks.
- Independent Tutoring, Bharath University 2007-2009
  - Subjects taught: C, C++, Java, Maths [I, II, III, IV], Computer Architecture.
  - Taught more than 150 students, batch size ranging from 2 to 15

AWARDS

- Advisory board member, OneQube
- Honorable spotlight award, Visual Question Answering Challenge, CVPR 2016
- Best paper award at International Conference on Perspective of Computer Confluence, Pune 2012
- Gold Medal for being university topper, Bharath University, Chennai 2008

PUBLICATIONS

- PDF Prakash, Aaditya, et al. Semantic Perceptual Image Compression using Deep Convolution Networks. DCC (2017).
- PDF Prakash, Aaditya, et al. Condensed Memory Networks for Clinical Diagnostic Inferencing. AAAI (2017).
- PDF Prakash, Aaditya, et al. Neural Paraphrase Generation with Stacked Residual LSTM Networks. COLING (2016).
- PDF Prakash, A. & Storer, J, Highway Networks for Visual Question Answering, CVPR Workshop (VQA) (2016).
- PDF Prakash, A. Reconstructing Self Organizing Maps as Spider Graphs for better visual interpretation of large unstructured datasets. *Infosys Lab Briefings*, Vol 11. INFY (2013)
- PDF Prakash, A. Measures of Fault Tolerance in Distributed Simulated Annealing. *Proceedings of International Conference on Perspective of Computer Confluence with Sciences* Vol 1 pp111-114. PICPC (2012)
- PDF Prakash, A., & Jha, R. K. New Interface Protocol to Connect Multiple Bank Networks from a Single Outlet. *International Journal of Computer Applications, NY, USA*, Vol 55 pp1-9. IJCA (2012)