## Aaditya Prakash (Adi) aprakash@brandeis.edu, iamaaditya.github.io Blog **a**, Github **O**, Scholar **B**, LinkedIn **in**, Twitter

RESEARCH	Semantic Image Compression using CNN1, Visual Question Answering 1. A	dvisor: Sadid Hasan dvisor: James Storer dvisor: Liuba Shrira
EDUCATION	PhD, Computer Science, Brandeis University. Advisor: Prof. James Storer 12	Current
	MA, Computer Science, Brandeis University  Courses: Algorithms, Distributed Systems, Statistical approaches to NLP  Computational Semantics, Computational Neuroscience, Information Retrieval	2013 - 2015 GPA 4.0/4.0
	BS, Biomedical Engineering, Bharath University, Chennai, India <i>Courses</i> : Calculus(I, II), Complex Analysis, Numerical Methods, Digital Signal Processing Biostatistics, Medical Physics, Medical Imaging Lab, Modeling of Physiological Systems	2004 - 2008 GPA $9.36/10$ Rank = $1/71$
	Completed 24 MOOC courses from Coursera, Udacity, edX, Harvard Business School Machine Learning (Ng), Game Theory, Algorithms, Neural Networks (Hinton), AI (Abbeel)	2012 − 2013 Certificates ☑
COMPUTING SKILLS	Languages : Python, C, C++, CUDA, Matlab  Deep Learning : TensorFlow[TF], Keras, PyTorch, Theano, Torch  Research Tools : iPython, SciPy, NumPy, OpenCV, Git, Bash, LATEX  Big Data Tools : Hadoop, MapReduce, MongoDB, Mahout, Spark  Code Samples : VQA [Keras] &, Multi-structure ROI [TF] Neural Paraphrase Generation [TF] &  : Multi-agent GANs [TF], Fallacy Detector [Haskell] &	
EXPERIENCE	Research Intern, Qualcomm Research	Summer 2017
	<ul> <li>Explored model parallelism for convolutional neural networks</li> <li>Architecture learning for reduced model complexity</li> </ul>	
	<ul> <li>Deep Learning Developer (contract), Spin Master™, Canada</li> </ul>	Oct-Dec 2016
	<ul> <li>Designed CNN models for fine grained classification of various toys</li> <li>Developed Android App for classification/detection in real-time</li> </ul>	
	• Associate Research Scientist (part-time), AI Labs, Philips Research, Cambridge, MA	2016 - 2017
	<ul> <li>Use of neural networks for detecting adverse drug reaction, WWW 2017 ♂</li> <li>Clinical text simplification and paraphrase generation, Clinical-NLP COLING 2016 ♂</li> </ul>	
	• Research Intern, AI Labs, Philips Research, Cambridge, MA	Summer 2016
	<ul> <li>Explored applications of LSTM in sequence to sequence learning, COLING 2016 €</li> <li>Developed efficient representation of memory state for Memory Networks, AAAI 201</li> </ul>	7ਫ

· 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
- Teaching Assistant, Brandeis University

2013-Current

Mobile Application Development

Scientific Data Processing in MATLAB

- Fundamentals of Artificial Intelligence

Introduction to Big Data Analysis

- Theory of Computation
- Data Structures
- Introduction to Algorithms
- Data Compression & Multimedia

Independent Algorithmic Trading

2010-2012

- Statistical Arbitrage trades on co-integrated pairs (INFY/TCS, ICICI/IDFC, MRF/Apollo)
- Low latency Options strategies (Butterfly spread) on Nifty50
- Designed, developed and programmed several algorithmic strategies as a contractual work
- Senior Systems Engineer, Infosys Limited ☑

2009-2013

- Developed new algorithm to visualize large unstructured datasets
- Implemented various Machine Learning algorithms on Map-Reduce (Mahout)
- Analyzed various fault measures in distributed optimization problems
- Independent Tutoring, Bharath University □

2007-2009

- Courses taught: C, C++, Java, Maths [I, II, III, IV], Computer Architecture
- Taught more than 50 students in batch sizes ranging from 2 to 15

## **RECOGNITIONS**

- Roberto Padovani (Qualcomm) Scholarship Award, 2017
- Outstanding Teaching Fellow, Brandeis University, 2017<sup>™</sup>
- 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 securing highest rank), Bharath University, Chennai 2008

## **PUBLICATIONS**

 $\triangle \rightarrow$  first author

- **Let Deflecting Adversarial Attacks with Pixel Deflection.**
- In-review PDF♂
- A Protecting JPEG Images Against Adversarial Attacks (oral).

• **Semantic Perceptual Image Compression using Deep CNNs (oral).** IEEE DCC 2017 PDFC

· Visual Lecture Summary using Intensity Correlation Coefficient.

IMVIP 2017 PDF℃

IEEE DCC 2018 PDFC

• & Condensed Memory Networks for Clinical Diagnostic Inferencing.

AAAI 2017 PDF♂

Adverse Drug Event Detection in Tweets with Semi-Supervised CNNs.

WWW 2017 PDF℃

• A Neural Paraphrase Generation with Stacked Residual LSTM.

COLING 2016 PDFC

• **Lesson Answering (honorable award).** 

CVPR (VQA) 2016 PDFC

• & Reconstructing Self Organizing Maps as Spider Graphs for Better Visual Interpretation of Large Unstructured Datasets. Infosys Lab Briefings, Vol 11.

INFY 2013 PDF℃

• 
Measures of Fault Tolerance in Distributed Simulated Annealing (best paper).

PICPC 2012 PDFC