Aaditya Prakash (Adi) aprakash@brandeis.edu, iamaaditya.github.io Blog ♠, Github ♠, Scholar ੴ, LinkedIn **in**, Twitter ❤

RESEARCH	Semantic Image Compression using CNNt, Visual Question Answering t	visor: Sadid Hasan lvisor: James Storer lvisor: Liuba Shrira
EDUCATION	PhD, Computer Science, Brandeis University. Advisor: Prof. James Storer 더	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, Languages Big Data Tools : Hadoop, MapReduce, MongoDB, Mahout, Spark Code : VQA [Keras] & Multi-structure ROI [TF] & Neural Paraphrase General : Multi-agent GANs [TF] & Pixel Deflection [Keras] & Fallacy Detector [Annual Paraphrase General : Multi-agent GANs [TF] & Pixel Deflection [Keras] & Fallacy Detector [Annual Paraphrase General : Multi-agent GANs [TF] & Pixel Deflection [Keras] & Fallacy Detector [Annual Paraphrase General : Multi-agent GANs [TF] & Pixel Deflection [Keras] & Fallacy Detector [Annual Paraphrase General : Multi-agent GANs [TF] & Pixel Deflection [Keras] &	
EXPERIENCE	Research Intern, Qualcomm Research	Summer 2017
	Explored model parallelism for convolutional neural networksArchitecture learning for reduced model complexity	
	 Deep Learning Developer (contract), Spin Master™, Canada 	Oct-Dec 2016
	Designed CNN models for fine grained classification of various toysDeveloped Android App for classification/detection in real-time	
	· Associate Research Scientist (part-time), AI Labs, Philips Research, Cambridge, MA	2016 - 2017
	 Use of neural networks for detecting adverse drug reaction, WWW 2017 ♂ Clinical text simplification and paraphrase generation, Clinical-NLP COLING 2016 ♂ 	
	Research Intern, AI Labs, Philips Research, Cambridge, MA	Summer 2016
	 Explored applications of LSTM in sequence to sequence learning, COLING 2016 c Developed efficient representation of memory state for Memory Networks, AAAI 2017 	·ď

· 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[™]
- · 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 $ilde{ ilde 2}$
- Gold Medal (for securing highest rank), Bharath University, Chennai 2008

PUBLICATIONS

♣→ first author

• **Let Deflecting Adversarial Attacks with Pixel Deflection.**

In-review PDFは

• A Protecting JPEG Images Against Adversarial Attacks (oral).

- IEEE DCC 2018 PDFで
- **Semantic Perceptual Image Compression using Deep CNNs (oral).**
- IEEE DCC 2017 PDFC

• Visual Lecture Summary using Intensity Correlation Coefficient.

IMVIP 2017 PDFC AAAI 2017 PDFC

• & Condensed Memory Networks for Clinical Diagnostic Inferencing.

- WWW 2017 PDF℃
- Adverse Drug Event Detection in Tweets with Semi-Supervised CNNs.
 Neural Paraphrase Generation with Stacked Residual LSTM.
- COLING 2016 PDFC
- Highway Networks for Visual Question Answering (honorable award).
- 0021110 2010 1 212

CVPR (VQA) 2016 PDFC

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

INFY 2013 PDF℃

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

PICPC 2012 PDFC