

BELHASSEN BAYAR

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EDUCATION

- Drexel University** *Fall 2014 - Present*
Ph.D. in Electrical & Computer Engineering
[Department website](#)
- Rowan University** *Fall 2013 - Summer 2014*
M.Sc. in Electrical & Computer Engineering ([Thesis](#), [Presentation](#))
[Department website](#)
- National Engineering School of Tunis (ENIT)** *Fall 2008 - Summer 2011*
B.Sc. in Electrical Engineering
Equivalent to a M.Sc. in the U.S. according to [World Education Services](#)
[Department website](#)
- Preparatory School for Engineering Studies of Tunis (IPEIT)** *Fall 2006 - Spring 2008*
Intensive two-year program in Mathematics & Physics field (MPSI)
[University website](#)

EXPERIENCE

- Samsung Research America** June - September 2015
Scalable Learning Platform: Research in Deep Learning *Mountain View, CA*
- Model Compression using low rank approximation in CNNs, i.e., GoogleNet and AlexNet, for Power Optimization.
 - Model Compression using convolutional layer response approximation in CNNs, i.e., GoogleNet and AlexNet.
 - Cross Inceptions approximation in GoogleNet for model compression.
 - Label Augmentation in ImageNet data for better classification rate.
- Drexel University** September 2014 - Present
Research & Teaching Assistant at the ECE Department *Philadelphia, PA*
- Research in Machine Learning and Image Forensics.
- Rowan University** September 2013 - July 2014
Research Assistant at the ECE Department *Glassboro, NJ*
- Research in Optimization Problems & Compressive Sensing.
- University of Arkansas at Little Rock** March 2011 - August 2013
Research Assistant at the Systems Engineering Department *Little Rock, AR*
- Research in Signal Processing & Computational Biology.
- University of Minnesota** June - September 2010
Research Intern at the ECE Department *Minneapolis, MN*
- Research in Data Deduplication - Center for Research in Intelligent Storage (CRIS) - Partnership between universities and industry.

TECHNICAL SKILLS

Programming Languages Python, R, C++, C, MATLAB

AWARDS

The Best Paper Award: The 2013 IEEE International Workshop on Genomic Signal Processing and Statistics ([GENSIPS 2013](#)).

Graduate Deans' List -College of Engineering: Cumulative Grade Point average of 4.0 for the Spring 2014 term, Rowan University ([Check website](#)).

Graduate Deans' List -College of Engineering: Cumulative Grade Point average of 4.0 for the Fall 2013 term, Rowan University ([Check website](#)).

NSF Travel Award for Students with the Best Peer Review Comments: The 2013 IEEE International Workshop on Genomic Signal Processing and Statistics ([GENSIPS 2013](#)).

NSF Travel Award for Students with the Best Peer Review Comments: The 2014 IEEE International Workshop on Genomic Signal Processing and Statistics ([GENSIPS 2014](#)).

PUBLICATIONS: FIRST AUTHOR

- Clustering Gene Expression Data using Probabilistic Non-negative Matrix Factorization. The 2011 IEEE International Workshop on Genomic Signal Processing and Statistics (GENSIPS'11) [[Link to the paper in IEEE xplore](#)]
- Probabilistic Non-negative Matrix Factorization: Theory and Application to Microarray Data Analysis. Journal of Bioinformatics and Computational Biology Accepted on Oct 27, 2013 [[Link to the paper in World Scientific](#)]
- Inference of Genetic Regulatory Networks with Unknown Covariance Structure- Best Paper Award. The 2013 IEEE International Workshop on Genomic Signal Processing and Statistics (GENSIPS'13) [[Link to the paper in IEEE xplore](#)]
- Kernel Reconstruction: an Exact Greedy Algorithm for Compressive Sensing. The 2014 IEEE International Workshop on Genomic Signal Processing and Statistics (GENSIPS'14) [[Link to the paper in IEEE xplore](#)]
- SMURC: High-Dimension Small-Sample Multivariate Regression with Covariance Estimation. IEEE Journal of Biomedical and Health Informatics Accepted on Jan 4, 2016 [[Link to the paper in IEEE xplore](#)]
- A Deep Learning Approach To Universal Image Manipulation Detection Using A New Convolutional Layer. The 2016 ACM Workshop on Information Hiding and Multimedia Security Accepted on April 16, 2016 [[Link to the ACM workshop program](#)]

LANGUAGES

English (Excellent) - French (Bilingual) - Italian (Good) - Arabic (Mother tongue).