

# SeyedAbbas Hosseini

Digital Media Lab., Room 803, Department of  
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- RESEARCH INTERESTS
- ◇ Probabilistic Machine Learning: Bayesian Nonparametric Models, Probabilistic Graphical Models, Variational Bayesian Inference, Monte Carlo Techniques
  - ◇ Stochastic Processes: Multivariate Point Processes , Survival Analysis
  - ◇ Dependent Data Modeling: Modeling Spatio-Temporal Data, Time-Sensitive Recommender Systems, User Behavior Modeling
  - ◇ High Dimensional Data Analysis: Sparse Data Modeling, Structured Dictionary Learning, Supervised Dictionary Learning
- EDUCATION
- Sharif University of Technology, Tehran, IRAN. September 2014 - Now  
Ph.D. in Computer Engineering-Artificial Intelligence, **Current GPA: 19.78/20**  
Research Proposal: *Continuous-Time Modeling of Marked Events*
- Sharif University of Technology, Tehran, IRAN. September 2012 - June 2014  
M.Sc. in Computer Engineering-Artificial Intelligence, **GPA: 19.55/20**  
Thesis: *Online Stream Classification Using Bayesian Non-parametric Models*, **20/20**
- Sharif University of Technology, Tehran, IRAN. September 2008 - June 2012  
B.S. in Computer Engineering, **GPA: 19.81/20**  
Thesis: *A Review On Bayesian Inference and Experimental Design Applications in Compressed Sensing*, **20/20**
- PUBLICATION
- ◇ **HNP3: A Hierarchical Nonparametric Point Process for Modeling Content Diffusion Over Social Media**,  
( A. Hosseini, A. Khodadadi, H. R. Rabiee, A. Arabzadeh ), *IEEE International Conference on Data Mining Barcelona, Spain, ICDM 2016*.
  - ◇ **Classifying A Stream Of Infinite Concepts: A Bayesian Nonparametric Approach**,  
( A. Hosseini, H. R. Rabiee, H. Hafez A. Soltani, ), *7<sup>th</sup> European Conference on Machine Learning and Principles and Practice of Knowledge Discovery in Databases ECML-PKDD Nancy, France, 2014*. .
  - ◇ **A unified statistical framework for crowd labeling**,  
( J. Muhammadi, H. R. Rabiee, A. Hosseini ), *Journal of Knowledge and Information Systems (KAIS)*(IF: 2.639), vol. 41, no. 1, October 2014. .
  - ◇ **Spatial-Aware Dictionary Learning for Hyperspectral Image Classification**,  
(A. Soltani, H. R. Rabiee, A. Hosseini ), *IEEE Transactions on Geoscience and Remote Sensing* (IF: 3.467), vol. 53, no.1, pp. 527-541, 2015. .
  - ◇ **Locality Preserving Discriminative Dictionary Learning**,  
(S. Haghiri, H. R. Rabiee, A. Soltani, A. Hosseini, M. Shadloo ), **Accepted** in *IEEE International Conference in Image Processing (ICIP) 2014*. .
- HONORS AND AWARDS
- ◇ **Ranked 1<sup>st</sup>** in Iranian Nationwide University Entrance Exam for Ph.D. Students, 2014
  - ◇ **Ranked 1<sup>st</sup>** in Cumulative GPA (19.55/20) among M.Sc. students of the artificial intelligence group, class of 2014 students, Department of Computer Engineering.
  - ◇ **Gold Medal** in National Computer Olympiad for University Students, Summer 2012, Tehran

- ◊ Awarded Fellowship of National Elite Foundation of Iran for, 2012-2016
- ◊ **Ranked 1<sup>st</sup>** in Cumulative GPA (19.81/20) among about 120 B.Sc.students of the department, class of 2012 students, Department of Computer Engineering.
- ◊ Awarded Fellowship of Exceptional Talents of Sharif University of Technology for MSc. Program, 2012
- ◊ Awarded as **Outstanding Student** by university president, 2012
- ◊ Awarded **summer internship grant** from Swiss Federal Institute of Technology, Lausanne(EPFL), Summer 2011, Lausanne
- ◊ **Silver Medal** in Iranian National Olympiad in Informatics, 2007

INTERNSHIPS     **Internship at Ecole Polytechnique Federale de Lausanne**     **Summer 2011**  
**Laboratory For Probabilistic Machine Learning (LAPMAL)**  
Mentor: Prof. Matthias Seeger

RESEARCH     ◊ **Using Time Dependent Non-parametric models for Stream Classification**, at Digital Media  
EXPERIENCE     Lab, Sharif University of Technology, 2014  
In this work, we proposed a new model for stream classification using time dependent nonparametric models. This model can handle concept drift in stream classification problem properly. more details can be found in here.

◊ **HyperSpectral Image Classification Using Dictionary Learning**, at SSP group of DML at Sharif University of Technology, Fall 2012.  
In this work, we proposed a structured dictionary-based model for hyperspectral data that incorporates both spectral and contextual characteristics of a spectral sample, with the goal of hyperspectral image classification. more details can be found in here.

◊ **Speeding up Experimental Design Using Variational Inference**, at LAPMAL lab at EPFL, Summer 2011  
During this internship, I worked on speeding up MRI using compressed sensing (CS). In order to do so, I sped up two variational inference methods in order to accelerate the process of sampling matrix design. More details can be found in the following technical report. 

TEACHING     ◊ **Teaching**  
EXPERIENCE     Engineering Probability and Statistics (B.Sc. Course), Sharif University of Technology, (Fall 2014, Fall 2015, Spring 2016, Fall 2016)

◊ **Teaching Assistant**  
Stochastic Processes, Sharif University of Technology, (Fall 2013), Prof. Rabiee  
Machine Learning, Sharif University of Technology, (Fall 2013), Dr. Soleymani

INDUSTRIAL     ◊ **Tapsell**, Summer 2015  
EXPERIENCE     Machine Learning Scientist  
Tapsell is the leading mobile online advertising system in Iran with more than 15 million users. In Tapsell, I was a member of the data processing group. In this group, we designed and implemented personalized ad recommender system and fraud detection system.

◊ **Backtory**, Summer 2014  
Software Engineer  
Backtory is a mobile back-end as a service (mBaaS) platform that provides the perfect set of tools to free the developer from back-end programming. In Backtory, I was a member of a team that designed and developed a database as a service platform.

TALKS AND     ◊ **Stream Classification, A Bayesian Nonparametric Approach** in *Max Planck Institute for Intelli-*  
PRESENTA-     *gent Systems, Tübingen.*, Winter 2014.  
TIONS     ◊ **Graphical Models and Bayesian Inference** in *Digital Media Lab. Sharif University of Technology*, Summer 2012.

◊ **Bayesian Modeling in Machine Learning** in *Digital Media Lab. Sharif University of Technology*, Spring 2012.

- TEST  
SCORES      ◇ **TOEFL** (Nov 2011): Internet-Based Test **102/120**  
                    *Reading* (27/30), *Listening* (25/30), *Speaking* (23/30), *Writing* (27/30).
- SKILLS      ◇ Programming Languages: Java, Python, C, C++, Matlab.  
                    ◇ Databases: MongoDB, Oracle, Postgres, Elasticsearch  
                    ◇ IDEs and Version Control Tools: IntelliJ IDEA, PyCharm, Eclipse, Git, SVN  
                    ◇ Virtualization and Containerization: VMWare, Docker, etc  
                    ◇ Continuous Delivery Toolset: Gitlab, Artifactory, Jenkins, Docker Registry
- REFERENCES ◇ Prof. Hamid R. Rabiee  
                    Professor of Electrical and Computer Engineering  
                    Computer Engineering Department  
                    Sharif University of Technology  
                    Azadi Street  
                    Tehran, Iran  
                    rabiee@ sharif.edu
- ◇ Dr. Mohammad Hossein Rohban  
                    Postdoctoral Associate  
                    Electrical and Computer Engineering Department  
                    Boston University  
                    Boston, MA 02215, United States  
                    mhrohban@bu.edu