



# Seyed-Saeid Masoumzadeh

## Curriculum Vitae

### About Me

I am a Machine Learning Engineer and a Data Scientist who has extensive experience in researching and developing Machine Learning, Deep Learning and Natural Language Processing, and delivering them into production. I obtained a bachelor's degree in Computer Engineering, a master's degree in Artificial Intelligence and a Ph.D. in Computer Science from Vienna University with a focus on using Machine Learning approaches specially *Reinforcement Learning* to manage cloud data centers. I have published several papers in well-known journals and conferences.

### Education

- 2012–2017 **PhD in Computer Science**, *University of Vienna, Austria*, Thesis Title: Autonomic Management of Virtual Machines in Cloud Data Centers Using Machine Learning.
- 2006–2009 **MSc In Artificial Intelligence**, *Azad University, Iran*, Thesis Title: Intelligent and Adaptive Active Queue Management in Packet Switching Networks.
- 1999–2004 **BSc In Computer Engineering - Hardware**, *Azad University, Iran*.

### Research Interests

- Neural Information Retrieval
- Model Based Approaches to Recommendation
- Neural Item/User Representation in E-Commerce Platform
- Personalised Ranking and Recommendation
- Neural Language Models

### Skills

Programming	Python, Java
Deep Learning Frameworks	Tensorflow, Keras
Machine Learning Pipelines	Metaflow, Sklearn
Machine Learning/Data Analysis	Sklearn, Pandas, Looker, SQL
Scientific Computing/Mathematics	Numpy, SciPy
Visualization	Matplotlib, seaborn
NLP tools	Spacy, NLTK, Rasa NLU, Gensim

---

## Professional Experience

- 2.2018-Present **Senior Data Scientist**, *Lyst*, London, UK.  
Research and development on machine learning and deep learning techniques to build ranking algorithms and recommendation systems. Below are some of the projects shipped into the production which I have been significantly involved in:
- A Cold Start Free Collaborative Filtering Recommendation Based on Users Interactions
  - A Content Based Recommendation Using Item Images
  - A Multi Objective Ranking System
  - A Query Auto Completion System
  - A Ranking Diversification Algorithm
  - A Personalised Re-ranker Algorithm
  - A Name Entity Algorithm for Query Segmentation
- 9.2016-1.2018 **Co-Founder/ Data Scientist**, *Cyra/RECBO Corp LTD*, London, UK.  
This is related to the entrepreneurial side of my experience. I have co-founded a company called RECBO, backed by Entrepreneur First. At this company, Cyra was born, which is an A.I virtual assistant in Recruitment. I have used different type of Natural Language Processing techniques to give life to Cyra. It is now able to talk with customers through a chat interface, *understand* their hiring needs and then provide and *recommend* the best candidates to them.
- 3.2016-8.2016 **Entrepreneur in Residence**, *Entrepreneur First*, London, UK.
- Entrepreneur First is the only seed investment program that selects purely on the basis of technical talent. It takes the best computer scientists and engineers, usually before they have a team or a startup idea, and help them build technology startups in London. 3% Acceptance rate. I have co-founded Recbo at EF and received an initial funding after graduation..
- 8.2015-1.2016 **Machine Learning Developer**, *Eco Talent Discovery/Stackbox*, London, UK.
- Research and development on a specialised Recommender System using Natural Language Processing and Machine Learning techniques to provide the best job roles for a given candidate profile.
- 3.2012-8.2015 **PhD Researcher**, *University of Vienna*, Vienna, Austria.  
Research on Autonomic Management of Virtual Machines in Cloud Data Centers Using Machine Learning approaches in special Reinforcement Learning Algorithms and Multi Agent Systems.
- 5.2015-6.2015 **Visiting Researcher**, *Umea Univeristy*, Umea, Sweden.  
During this research visit, we developed a self adaptive capacity controller for overbooked datacenters using a reinforcement learning algorithm, led to publish one poster and one full paper in ICAC 2016 and ICCAC 2016 respectively and received the best paper award from ICCAC 2016.

---

## Publications

- Journal Articles S. Brienza, S.E. Cebeci, S. S. Masoumzadeh, H. Hlavacs, O. Ozkasap, G. Anastasi, "A Survey of Energy Efficiency in P2P Systems: File Distribution, Content Streaming and Epidemics", *ACM Computing Surveys*.
- S. S. Masoumzadeh, K. Meshgi, S. S. Ghidari, and G. Taghizadeh, " FQL-RED : an adaptive scalable schema for active queue management", *International Journal of Network Management*, vol. 21, no. 2, pp. 147–167, 2011.

- Book Chapters S. Brienza, S.E. Cebeci, S. S. Masoumzadeh, H. Hlavacs, O. Ozkasap, G. Anastasi, "Energy Efficiency in P2P Systems and Applications", In Jean-Marc Pierson editors, *Large-Scale Distributed Systems and Energy Efficiency: A holistic view*, Wiley, 2014.
- Peer-reviewed Conference Articles S. S. Masoumzadeh, H.Hlavacs and L. Tomas "A Self-Adaptive Performance-Aware Capacity Controller in Overbooked Datacenters", *Proc.2016 IEEE International Conference on Cloud and Autonomic Computing (ICCAC)*, Sep 12-16, 2016, Augsburg, Germany. **Received The Best Paper Award**
- S. S. Masoumzadeh, H.Hlavacs "A Gossip-Based Dynamic Virtual Machine Consolidation Strategy for Large-Scale Cloud Data Centers", *Proc.Third International Workshop on Adaptive Resource Management and Scheduling for Cloud Computing*, July 25-28, 2016, Chicago, IL, USA.
- S. S. Masoumzadeh and H.Hlavacs, "A Cooperative Multi Agent Learning Approach to Manage Physical Host Nodes for Dynamic Consolidation of Virtual Machines", *IEEE 4th Symposium on Network Cloud Computing and Applications*, June 11-12, 2015, Munich, Germany.
- S. S. Masoumzadeh and H.Hlavacs, "Integrating VM Selection Criteria in Distributed Dynamic VM Consolidation Using Fuzzy Q-Learning", *Proc.9th International Conference on Network and Service Management (CNSM)*, pp. 332–338, Oct. 2013.
- S. S. Masoumzadeh and H. Hlavacs, "An Intelligent and Adaptive Threshold-Based Schema for Energy and Performance Efficient Dynamic VMs Consolidation", in *Energy Efficiency in Large Scale Distributed Systems*, 2013, pp. 85–97.
- F. K. Hedayati, S. S. Masoumzadeh, and S. Khorsandi, "SAFS: A self adaptive fuzzy based scheduler for real time services in WiMAX system", *9th International Conference on Communication (COMM 2012)*, pp. 247–250, 2012.
- S. S. Masoumzadeh, G. Taghizadeh, K. Meshgi, and S. Shiry, "Deep Blue: A Fuzzy Q-Learning Enhanced Active Queue Management Scheme", *2009 International Conference on Adaptive and Intelligent Systems (ICAIS'09)*, pp. 43–48, 2009.
- R. Sabzevari, A. Shahri, A. R. Fasih, S. S. Masoumzadeh, and M. R. Ghahroudi, "Object detection and localization system based on neural networks for Robo-Pong", in *2008 5th International Symposium on Mechatronics and Its Applications*, 2008, pp. 1–6.