Ehsan Qasemi

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Machine learning expert and data-scientist with strong mathematical and CS background, experienced in working and managing teams with diverse cultures and skills. Researching on **End-to-End Automated Machine Learning (E2E-AutoML)** on high-dimensional and spatiotemporal datasets. Seeking **internship for summer 2019**

Education

PHD. in Computer Science:	University of Southern California (present)
MSC. in Computer Science (GPA 3.56/4):	University of Wisconsin-Madison ('18)
MSC. in Computer Engineering (GPA 3.56/4):	University of Wisconsin-Madison ('18)
BSC. in Electrical Engineering (GPA 16.12/20):	University of Tehran ('15)

Skills

Programming	C/C++, Python, Java, Scala, Matlab, Julia, bash, Octave, Cuda, OpenCl
HPC framework	Hadoop (HDFS, Tez), Spark (SQL, Streaming, GraphX), Apache(Hive, Storm, Flink)
ML Libs	Tensorflow, Keras, Pandas, MatPlotLib, Bokeh, scikit-learn, PyQt
Databases	SQL, SQL-Lite, RocksDB, MongoDB, SQLAlchemy
Web	Flusk, Django, HTML, CSS

Honors & Awards

- 4-Year Research **Scholarship Recipient** from University of Southern California — 2018-2022
- 1'st place in National Digital System Design Competition, HW/SW Co-design League, Iran — 2013
- 1'st place in 2D Soccer Simulation Competition, Iran — 2008
- Ranked as 57 among 500,000 students in National Universities Entrance Exam, Iran — 2010

Research

Center on Knowledge Graphs — INFORMATION SCIENCES INSTITUTE at USC

PHD Student under Prof. P. Szekely — *Jun '18 – present*

Meta-Learning:
- Study on **Meta-learning** approaches for E2E-AutoML with focus on **data-preparation**
- Study public domain codes to formulate state-of-the-art **data-cleaning** methods

E2E-AutoML:
- **DSBox**: End-to-End Automated Machine Learning (E2E-AutoML) system
- Supports high dimensional structured datasets (image, text, video, etc.)
- Beats state-of-the-art E2E-AutoML systems and human baseline on D^3M's datasets.

Persepolis Research Group — University of Wisconsin-Madison

Research Assistant under Prof. A. H. Assadi — *Dec '16 – May '18*
- Research and development in big heterogeneous spatiotemporal and structured high-dim data
- Novel clustering for discovery of Autism Spectrum Disorder (ASD) personalized therapy
- Propose an architecture based on deep LSTM and its implementation for ASD classification
- Proposed Entropy methods in ASD feature discovery, and pattern classification

Cases in Compensation	University of Wisconsin-Madison

Project Assistant *Dec '15 – Jun '16*
- Financial Data Analytic: Implement interactive application to manage and Analyze the Financial dataset
- Case In Compensation: Implement an integrated case on pay model and Compensation used in the HR Compensation textbook.

Industry

IWIN Co.	Tehran

Embedded Designer/Programmer/Verification Engineer *Aug '14 – July '15*
- FPGA-based Hardware Security Module (HSM) to provide a secure platform for bank applications such as money transactions, on SoC platform. (**Scala, Java, C++, RocksDB**)
- Manage a 4 member HW team to Design the FPGA-based hardware to implement wide range of cryptography algorithms in Chisel HDL (**RSA, AES, 3DES, ECC**)

Pardis Co.	Tehran

Programmer/Embedded Engineer *May '16 – Aug '16*
- Embedded low cost web server to manage a secure network nodes (**C++, Python**)

S.T.Farabi Co.	Sanandaj

Programmer *Jun '13 – Jan '14*
- Real-time Genetic algorithm (GA) based robotic arm controller on FPGA platform.
- GA based high throughput facial recognition hardware on FPGA platform

Publication

- *[SUBMITTED]* E. Qasemi, S. Stan, K. Yao, R. Shao, J. Liu, M. Liang, L. J. Ferrer, P. Szekely, "DSBox: Data Scientist in a Box", IJCAI-19, August 10-16 2019, Macao, China

- Z. Liz Li, E. Qasemi, A. Ardalan, H. Gao, A. H. Assadi, "A Computational Model for Mental Face Spaces: Deep Learning Empirical Space of Faces", The 2017 International Conference on Computational Science and Computational Intelligence (CSCI 17), Dec 2017, Las Vegas, USA.

- A. H. Assadi, P. Han, E. Qasemi, A. Ardalan, H. Gao, "Deep Learning Empirical Topology for Classical Music Style Decision Making", The 2017 International Conference on Computational Science and Computational Intelligence (CSCI 17), Dec 2017, Las Vegas, USA.

- S. Yuchen, E. Qasemi, A. Ardalan, H. Gao, A. H. Assadi, "Deep Learning Art History from Data: Baroque Intellectual Influence on the Romantic Era Painting", The 2017 International Conference on Computational Science and Computational Intelligence (CSCI 17), Dec 2017, Las Vegas, USA.

- M. Biglari, E. Qasemi, B. PourMohseni, "Maestro: A High-Performance AES Encryption/Decryption System", The 17th CSI International Symposium on Computer Architecture & Digital Systems (CADS 2013), October 2013, School of Computer Science, IPM.

- E. Qasemi, Mohammad H. Shadmehr, Bardia Azizian, Amir Samadi, Sajjad Mozaffari, Amir Shirian and Bijan Alizadeh, "Highly Scalable, Shared Memory , Monte Carlo Tree Search based Blokus Duo Solver on FPGA ", International Conference on Field-Programmable Technology (FPT), 2014.

Voluntary & Leadership

- President at Persian Student's Society of UW Madison (PSS)   2015-2017

- Team Leader @ ICFPT Design Competition   2014 and 2015

- Team Leader @ FPGASoC Design competition   2014