

# Eric (Ehsan) Qasemi

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proska

## Education

*PhD.* in Computer Science Cont.  
Univ. of Southern California 3.48/4.0

*MSc.* in Comp. Science 2018  
Univ. of Wisconsin-Madison 3.55/4.0

*BSc.* in Electrical Engr. 2015  
University of Tehran 16.12/20.0

## Skills

LANGUAGES: Python, C/C++, Java, Scala,  
Matlab, Julia, Cuda

ML&DS: Torch, Tensorflow, Keras, NLTK,  
Spacy, Pandas, Matplotlib, Bokeh, scikit

HPC: Hadoop (HDFS, Tez), Spark (SQL,  
Streaming, GraphX), Apache (Hive, Storm,  
Flink)

DATABASES: SQL, SQL-Lite, Redis, Elas-  
ticSearch, RocksDB, MongoDB

Web: React, Flask, Django, HTML, CSS,  
JavaScript

## Honors

Research Scholarship Recipient from Uni-  
versity of Southern California (2018)

1<sup>st</sup> place in National Digital System De-  
sign Competition, HW/SW Co-design  
League, Iran (2013)

## Voluntary

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

Board Member of the first Iranian film  
festival (WIFF), March '17

## Research Experience

### Machine Common Sense Reasoning

Los Angeles, CA 2019-Cont.

CSKG: Consolidate various resources of commonsense knowledge into a first integrated commonsense knowledge graph (Python, Spacy, NLTK, torch)

ContextQusite: Reinforcing commonsense knowledge graphs with con-  
textual requisites (Python, Spacy, NLTK, huggingface, torch)

### Knowledge Graph Embedding for Table Parsing

Los Angeles, CA Summer '19

Representational capacity of graph embedding for ontology mapping in  
Knowledge Graphs (Python, DGL, torch, SPARQL)

Tabular Data to Knowledge Graph: Understand table context and map  
the content to knowledge graphs such as dbpedia and wikidata (Python,  
huggingface, SPARQL, Redis, Spark, Elasticsearch)

### End-to-End AutoML

Los Angeles, CA Jan-May'19

Study on Meta-learning approaches for E2E-AutoML with focus on data-  
preparation

DSBox: End-to-End Automated Machine Learning system (Python, ten-  
sorflow, keras, torch)

### Discovery of Autism Spectrum Disorder (ASD)

Madison, WI 2016-'18

Research and development in big heterogeneous spatiotemporal data  
(Python, tensorflow, keras, scikit)

Designed deep LSTM model for ASD prediction (Python, tensorflow,  
keras, scikit)

## Work Experience and Internships

### Research Intern

Information Sciences Institute, Marina Del Ray, CA Summer'18

Designed a Meta-Learning pipeline recommender system for automated  
machine learning in high dimensional structured datasets (Python, ten-  
sorflow, keras, torch, MongoDB)

### Software/Hardware Engineer

IWIN Co., Tehran, Iran 2014, '15

SoC Hardware Security Module (HSM) for banking applications (Scala,  
Java, C, RocksDB)

10x improvement on throughput of AES, 9x improvement on throughput  
of key manager, and 4x improvement on throughput of RSA

Lead the HW team to design cryptography algorithms and secure key  
managers

### Research Intern

Pardis Co, Tehran, Iran Summer'16

Designed an Embedded low cost server for real-time media encryption  
(C, Assembly, Lua)

## Selected Publication

**NLP** Ilievski F, Szekely P, Cheng J, Zhang F, Qasemi E. Consolidating Commonsense Knowledge. arXiv preprint arXiv:2006.06114. 2020 Jun 10.

**AutoML** E. Qasemi, S. Stan, K. Yao, R. Shao, J. Liu, M. Liang, L. J. Ferrer, P. Szekely, "DSBox: Data Scientist in a Box", ISI Graduate Student Symposium (GSS '19), Marina Del Rey, California, USA.

**NLP** Thawani A, Hu M, Hu E, Zafar H, Divvala NT, Singh A, Qasemi E, Szekely PA, Pujara J. Entity Linking to Knowledge Graphs to Infer Column Types and Properties. In SemTab@ ISWC 2019 (pp. 25-32).

**AI** 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.