Eric (Ehsan) Qasemi

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Education ——————

PhD. in Computer Science — Cont.
Univ. of Southern California

MSc. in Comp. Science — 2018
Univ. of Wisconsin-Madison

BSC. in Electrical Engr. — 2015
University of Tehran

Skills ——————

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

ML: Torch, Tensorflow

HPC: Apache (Spark, Arrow, etc.)

DB: Ray, SQL, Redis, ElasticSearch, MongoDB, Stardog

Web: React, JS, CSS, HTML, Flask

Honors ——————

Research Scholarship Recipient from University of Southern California (2018)

1'st place in National Digital System Design 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

Preconditioned Inference in Common Sense
Los Angeles, CA — 2019-Cont.

PInKS: Minimally supervised solutions for preconditioned inference of commonsense knowledge(huggingface, torch, Snokel)

CoreQuisite/PaCo: Circumstantial preconditions of commonsense knowledge (Spacy, NLTK, huggingface, torch)

CSKG: Consolidate resources of commonsense knowledge into an integrated commonsense knowledge graph (Spacy, NLTK, torch)

Knowledge Graph Embedding for Table Parsing
Los Angeles, CA — Summer '19

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

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
Oracle Co., Los Angles, CA — Fall'22

Intelligent Automation in Oracle Heatwave infrastructure

Hybrid AI Research Intern
Bosch LLC., Pittsburgh, PA — Summer'21-22

Study on neuro-symbolic approaches for traffic monitoring and traffic reasoning (Python, Torch, Stardog)

Research Intern
Information Sciences Institute, Marina Del Ray, CA — Summer'18

Meta-Learning pipeline recommender system for automated machine learning in high dim. structured datasets (Python, tensorflow, keras, torch, MongoDB)

Software/Hardware Full-Time 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

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 — Qasemi E, Ilievski F, Chen M, Szekely P. "PaCo: Preconditions Attributed to Commonsense Knowledge", EMNLP-Findings 2022.

NLP — Qasemi E, Khanna P, Ning Q, Chen M. "PInKS: Preconditioned Inference with Weak Supervision", AACL-IJCNLP 2022.

NLP — [In-Review EACL2023] Singh, Shikhar, Ehsan Qasemi, and Muhao Chen. "VIPHY: Probing" Visible" Physical Commonsense Knowledge." arXiv preprint arXiv:2209.07000 (2022)

NLP — Qasemi E, Oltramari A. "Intelligent Traffic Monitoring with Hybrid AI", Artificial Intelligence for Autonomous Driving workshop at IJCAI, 2022.

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

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. InSemTab@ISWC 2019.

NLP — Qasemi E, Kezar L, Pujara J, Szekely P. Evaluating Machine Common Sense via Cloze Testing. arXiv preprint arXiv:2201.07902.