Eric (Ehsan) Qasemi

qasemi@wisc.edu – qasemi.ehs@gmail.com
215 N Frances - Madison, WI 53703
WEBSITE: ehsanqasemi.com
Tel: +1-608-571-8947

OBJECTIVES

Dynamic Software Engineer with strong mathematical background, focused on Machine learning and data science. skilled at developing complex solutions with high performance and low cost. Experienced in working and managing teams with diverse cultures and skills, seeking entry level position.

EDUCATION

MSC. IN COMPUTER SCIENCE(GPA 3.53/4) : University of Wisconsin at Madison, **(Graduate: Dec 2018)**

MSC. IN COMPUTER ENGINEERING (GPA 3.53/4) : University of Wisconsin at Madison, (Graduated: May 2017)

- CERTIFICATE IN ENTREPRENEURSHIP (GPA 3.5/4): University of Wisconsin Madison, Madison, WI, USA

BSC. IN ELECTRONICS ENGR. /DIGITAL SYS. (GPA 16.12/20) : University of Tehran, (Graduated: February 2015)

Skills

Programming : C/C++, Python, Java, Scala, Matlab, Julia, Octave, Cuda, OpenCl, Assembly, VB
HPC Libraries : OpenMP, MPI, Charm++, Hadoop (HDFS, MR, Hive, Tez), Spark (Zookeeper, storm, flink)
HDLs : Verilog, Systemverilog, VHDL, Chisel HDL, System C/C-AMS
ML Libs : Tensorflow, Keras, Pandas, NumPy, SciPy, MatPlotLib, scikit-learn, PyQt, JuMP, D3
Databases : SQL, SQL-Lite, RocksDB

PROFESSIONAL EXPERIENCE

LEAD HARDWARE DESIGNER/PROGRAMMER/VERIFICATION ENGINEER — AUGUST 2014-JULY 2015
IWIN CO. — Tehran, IRI

- FPGA-based **Hardware Security Module (HSM)** to provide a secure platform for bank applications such as money transactions, on Zync7100 SoC platform.
- Manage a 4 member HW team to Design the FPGA-based hardware to implement wide range of cryptographic algorithms in Chisel HDL (RSA, AES, 3DES, ECC, etc.)

PROGRAMMER/EMBEDDED ENGINEER — MAY 2016-AUGUST 2016
PARDIS CO. — Tehran, IRI

- Embedded low cost **web server** to manage a cryptographic network node to **secure media the communication**.

PROGRAMMER/EMBEDDED ENGINEER — JUN 2013-JAN 2014
S. T. Farabi Co. — Sanandaj, IRI

- High performance, low-cost **Genetic algorithm (GA)** based robotic arm controller on FPGA platform.
- GA based high throughput **facial recognition** hardware on FPGA platform

NOTABLE PUBLICATIONS

- ACCEPTED: 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

- ACCEPTED: 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
- ACCEPTED: 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, Tehran, Iran.
- 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.

RESEARCH EXPERIENCE

PERSEPOLIS RESEARCH GROUP University of Wisconsin-Madison
Prof. Amir Assadi 2016-Current

- Research and development in big data science methods: Manage and process **massive heterogeneous spatiotemporal data sets** and **big data** that includes time-series data, video, genome sequence etc.
- Research team member for the project: Novel clustering and data visualization methods for discovery of **Autism Spectrum Disorder (ASD)** personalized therapy.
- Propose an architecture based on **deep recurrent neural network** and its implementation for a solution of ASD classification.
- Research and development of physics-based algorithm and software: **Entropy methods** in ASD feature discovery, and pattern classification.
- **Intellectual Property** (**IP**) disclosure: Novel algorithms and methodology in medicine of ASD, disclosed to Wisconsin Alumni Research Foundation **(WARF)** for patent application.
- Research in Progress:
  - Big data local-to-global methods in analysis and prediction of dynamics in **atmospheric chemistry spatiotemporal data**.
  - Inverse problems in **brain activation dynamics** using multiple modalities (**fMRI**, **EEG**, and **DTI**)

CASES IN COMPENSATION University of Wisconsin-Madison
Prof. Barry Gerhart 2015-2016

- **Financial Data Analytics**: Implement interactive application to manage and Analyse the Financial dataset
- Case In Compensation: Implement an integrated case on pay model and Compensation used in the HR Compensation textbook.

VOLUNTARY AND LEADERSHIP EXPERIENCE

- **President** at **Persian Student's Society of UW Madison (PSS)** 2015-2017
- Organize and Lead group of 7 undergraduate students to participate in:
  ICFPT Design Competition Summer and Fall 2014-15
  FPGASoC Design competition Winter 2014
- Embedded Linux workshop instructor at ICEEP Group Summer 2014

INTERESTS

Piano, and Setar (Persian Traditional instrument),
Archery, Hiking, Biking, and Hitchhiking (I have really missed this last one)
Languages: Persian(MT), Kurdish(MT), Azeri(MT), Arabic (reading knowledge), English