# Majid Rasouli

## Curriculum vitae

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#### **EDUCATION**

2015 - Present Computer Science

PHD CANDIDATE, 3.86/4 University of Utah, USA

2011 - 2013 **Mathematics** 

MASTERS, 16.31/20 Sharif University, Iran Ranked No.1 in Iran on QS

2006 - 2011 **Mathematics** 

BACHELORS, 15.03/20 RECEIVED CERTIFICATE OF **TOP 3** GRADUATES AMONG 20 Amirkabir University, Iran Ranked No.2 in Iran on QS

#### SOFTWARE SKILLS

Main **C++ (3+ years** experience), git,

MPI, OpenMP (Multithread),

SLURM

PROTOTYPING MATLAB, Julia

VISUALIZATION Paraview, Javascript, CSS, D3

FAMILIAR Python, R Studio, PySpark,

Linux, Bash

GAME ENGINE Basic: Unreal Engine, Unity

#### HONORS AND AWARDS

- Certificate for Graduation as **Top 3 GPA**'s Among 20 in 2006 Class, Bachelors in Mathematics
- Ranked in **Top 1 Percent** in The National University Entrance Exam for Masters Degree, 2011, Iran.
- Scholarship for International HPC Summer School 2017, University of Colorado, Boulder
- Scholarship for SDSC Summer Institute 2018, San Diego Supercomputer Center, UCSD

#### WORKSHOPS

2017 International HPC Summer School

ATTENDEE

University of Colorado - Boulder

2018 SDSC Summer Institute 2018

ATTENDEE

San Diego Supercomputer Center

#### SELECT COURSES

UNDERGRAD Basic Programming (C),

Advanced Programming (C++),

Linear Algebra, Logic, Numerical Linear Algebra, Probability and Stat 1 & 2,

GRADUATE Advanced Algorithms,

Algorithms and Approximation, Parallel Computing HPC, Big Data Computer Systems, Advanced Scientific Comp 1 & 2, Inverse Problems, Visualization

#### **EXPERIENCES**

2015-Now Graduate Research Assistant

DR. HARI SUNDAR'S LAB University of Utah

FALL 2016 Teaching Assistant

PROBABILITY AND STATISTICS

University of Utah

Helped students with R Studio

FALL 2017 Teaching Assistant

FOUNDATIONS OF DATA ANALYSIS

University of Utah

Helped students with Python to do

basic Machine Learning

#### **PROJECTS**

JAN 2016 - PRESENT

Developer Saena

Saena is a highly scalable algebraic multigrid solver written in **C++** parallelized with *MPI* and *OpenMP*. It does different linear algebra operations in serial and parallel. I have started this library as the only developer, under supervision of Dr. Hari Sundar.

https://github.com/majidrp/Saena

ACCEPTED PAPER

Developer, Paper First Author

## Matrix-Vector Product Optimization

We have optimized matrix-vector product, which is the most important operation in algebraic multigrid. It is implemented in Saena (C++). The paper is accepted in **IEEE HPEC18**.

**AVAILABLE** 

Coder

### USA Demographic Analysis

Used *Javascript*, CSS and D3 to make a visualization for USA demography.

https://majidrp.github.io/DemographicAnalysis/

To see all the projects please check my linkedin page.			