

# Majid Rasouli

## Curriculum vitae

Room 3345, MEB, University of Utah,  
SLC, UT, 84112  
+1 (801) 9702921  
maj.rasouli@gmail.com  
www.linkedin.com/in/majid-rasouli/

### 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),  
Linux, SLURM

PROTOTYPING MATLAB, Julia

VISUALIZATION Paraview, Javascript, CSS, D3

FAMILIAR Python, R Studio, PySpark,  
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 other projects please check my linkedin page.