

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.