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, 3.63/4
Sharif University, Iran
*Ranked No.**1** in Iran on QS*

2006 – 2011 **Mathematics**
Bachelors, 3.00/4
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	Unreal Engine (Basic), Unity (Basic)

Select Courses

Undergrad	Basic Programming (C), Advanced Programming (C++), Linear Algebra, Numerical Linear Algebra, Probability and Stat 1 & 2, Logic
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

Workshops

Jun 25 – 30, 2017 **IHPCSS17**
Attendee
University of Colorado

Aug 6 – 10, 2018 **SDSC Summer Institute**
Attendee
San Diego Supercomputer Center

Nov 12 – 17, 2017 **SC17**
Student Volunteer
Denver, Colorado

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, multi-thread parallel and multi-processor parallel. I am the only developer of this library under supervision of Dr. Hari Sundar.
https://github.com/majidrp/Saena

Accepted Paper

Developer
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/

For more projects please check my linkedin.