MANDANA FARHANG GHAHFAROKHI
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EDUCATION:
Old Dominion University, Norfolk, VA.
PhD, Computer Science   September 2022 until now   GPA:3.66/4
Research area: I'm currently working as a Graduate Research Assistant and Graduate Teaching Assistant at Old Dominion University. My main area focused on two key aspects: developing forward mode auto-differentiation with operator overloading and reverse mode auto-differentiation from scratch in C++.
I've built Flux computational fluid dynamics (CFD) code from the ground up. Additionally, I've also gained experience in parallel computing by working on GPU-based gradient computations using CUDA.

Najafabad Branch, Islamic Azad University, Isfahan, Iran
M.Sc., Computer Engineering-Software   September 2014-2017   GPA: 18.44/20
Thesis Topic: Improving ESAMR method for recognizing straggler task in Hadoop with Artificial Neural Networks.
In the current research, a dynamic method is presented to estimate task execution time. In this method, the Neural Network Algorithm is used to estimate the weight of job process stages. The purpose of this study was to reduce the error of estimating task remaining time and finding straggler task correctly to increase efficiency in big data infrastructure. The proposed method was implemented in Hadoop open-source framework.
Supervisor: Dr. Faramarz Safi Esfahani

SheikhBahaee University, Isfahan, Iran
B.Sc., Computer Engineering-Software   September 2007-2011   GPA:16.44/20
Thesis Topic: Factory Production System with On-The-Fly Programming
Supervisor: Dr. Mahmood Mortazavi

Publications:

Journal Paper

Mandana Farhang, Faramarz Safi**,** *"Recognizing Map-Reduce Straggler Tasks in Big Data Infrastructures Using Artificial Neural Networks", Journal of Grid Computing, 2020.*

Conference Paper

Mandana Farhang, Faramarz Safi**,** **"***A survey of estimating Map-Reduce execution time methods in Hadoop Speculative Execution",* First International Conference on Computer Science and Engineering, CCSE 2017

Work Experiences:

Graduate Research Assistant and Graduate teaching Assistant
Old Dominion University, Norfolk, VA. (Sep2022-now)
Description:

- *Graduate teaching assistant for "Operating System", "Problem Solving and Programming" and "Introduction to Computer Architecture" courses.*

Maintaning multiple applications using Django
Airport Cooperative Research Program (ACRP) (May 2023-August 2023)
Description:

- *Maintaining multiple applications (VSGC application and Graward application) using Django, for the Airport Cooperative Research Program (ACRP), a program of the Transportation Research Board.*

Website Developer
Website designer at AvayeJavid, musical institution located in Isfahan, Iran (Jan 2019- Feb 2022)
Description:

- Designed and developed websites using HTML and CSS, focusing on responsive design for optimal user experience.
- Solving code problems.
- Participated in weekly client meetings to discuss solutions and update project status.

Research Assistant
Najafabad Branch, Islamic Azad University, Isfahan, Iran (Jan 2018- Feb 2020)
Description:

- Planned, modified, and executed research techniques, procedures, and tests.
- Performed statistical, qualitative, and quantitative analysis.
- Gathering, arranging, and correcting research data to create representative graphs and highlighting results for Journal Article.

Software Test Engineer
IRISA(International Systems Engineering & Automation Company), Dec 2011-Feb 2014
Description:

- Following up on bugs reported by various users.
- Develop and document test plans and procedures for new prototype devices.
- Implement continuous improvement strategies for test design, management, and execution processes.
- Implement and validate test environment, automation, and variant management solutions and problems with networks.

Dynamic Programmer (Internship)
IRISA(International Systems Engineering & Automation Company), April 2011-June 2011
Description:

- implementation of applications in Oracle and C# programming languages.
- Developed and modified several Forms and various modules.
- Created scripts to create new tables, views, and queries for new enhancements in the application.