Ahmad Hossein Yazdani

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Research interests

I'm keen on doing research on a variety of aspects in computer systems , especially in I/O in distributed systems, cloud computing and High Performance Computing. In particular, my research interests have recently been shifted towards **Systems for ML**, as well as employing **ML models to optimize Systems**. Besides, I would like to conduct research on some hot areas like **Adapting distributed applications to an environment containing persistent memories**, **GPU scheduling of distributed applications**, in addition to **Software Hardware co-design to optimize serverless computing environments**

Education

Virginia Polytechnic Institute and State University (Virginia Tech)
Blacksburg, VA, US
PhD in Computer Science — August 2020 – Present
Advisor: Ali R. Butt *GPA: 3.92.*

University of Tehran — Tehran, Iran
BS in Computer Software Engineering — September 2015 – July 2020
GPA: 3.2.

Work experience

Research Assistant at Distributed System and Storage Lab at Virginia Tech university
Advisor: Ali R. Butt — August 2020 – Present

- Contributing to Metis project ongoing which is about improving the cachability of the deep learning workloads
- Leading a collaborative research with Analytics & AI Methods at Scale Group at Oak Ridge National Laboratory (ORNL) on analytically recognize the behavior of the users and jobs submitted to HPC systems. The work has been kicked off since the time I interned at ORNL in summer 2021

Internship at Oak Ridge National Laboratory, Analytics & AI Methods at Scale Group
Mentors: Feiyi Wang, Sarp Oral, Ahmad Maroof Karimi and Arnab Kamur Paul
June 2021 – August 2021

- First studied the literature on I/O characterization at application level to get insights for building an application and user aware I/O scheduler
- Then collected I/O information of different users and different applications, and showed the user's behaviour affects the I/O performance quite a lot
- Then presented my work at Internship Symposium held for the interns joined the national lab in summer 2021

Summer Internship at Router lab at University of Tehran
Supervisor: Nasser Yazdani June 2018 – August 2018

- Improved the lab's website in terms of responsiveness and SEO
- Read CISCO's documentations to make the lab router's CLI identical to CISCO
- Also, I was invited to participate in a project for adding QoS to data plane of the lab's routers.

Teaching experience

Instructor, Virginia Tech Spring 2023
CS 3214: Computer Systems
Giving presentations to one section (75 students) in parallel with two other sections taught by Godmar Back and Dan Williams.

Instructor, Virginia Tech Fall 2022
CS 3214: Computer Systems
Giving presentations to one section (75 students) in parallel with two other sections taught by Godmar Back and Huacheng Li.
Course website: https://courses.cs.vt.edu/cs3214/fall2022

Teaching assistant, Virginia Tech Summer 2022
CS 3114: Data Structures and Algorithms
Grading, Office hours

Teaching assistant, Virginia Tech Spring 2022
CS 3214: Computer Systems
Grading, Office hours

Teaching assistant, Virginia Tech Fall 2021
CS 3214: Computer Systems
Grading, Office hours

Teaching assistant, Virginia Tech Summer 2021

CS2506: Computer Organization II
Grading, Office hours

Teaching assistant, Virginia Tech Spring 2021
CS3704: Intermediate Software Design and Engineering
Grading, Office hours

Teaching assistant, Virginia Tech Fall 2020
CS1114: Introduction to Software Design
Grading, Office hours, hosting lab sessions

Teaching assistant, University of Tehran Spring 2020
Artificial Intelligence
hosted project help session, created a project assignment and homework assignment, grading

Teaching assistant, University of Tehran Fall 2019
Formal Methods in Software Engineering
created a project assignment and a homework assignment, grading

Teaching assistant, University of Tehran Spring 2019
Programming Languages and Compilers
created and led the project course, hosted a help session for each phase of the project, grading

Teaching assistant, University of Tehran Fall 2018
Programming Languages and Compilers
created 2 homework assignments, grading the course project and homework assignments

Presentations

Poster: Profiling User I/O Behavior for Leadership Scale HPC Systems
August 2022
MUG22
A conference sharing the recent advancements on MVAPICH (A library overlaying MPI), and how these improvements impact the applications

Awards and honors

Student Volunteer at SC22, Dallas, TX November 2022

Skills

Programming Languages
C, C++, Java, Python, Go, HTML, CSS, JavaScript
HDL
Verilog, VHDL
DBMSes
MySQL, SQLite, MS-SQL

Machine Learning libraries and frameworks
sklearn, Pytorch, Tensorflow
Enterprise Application frameworks
Django, ReactJS, NodeJS
Containerization Tools
Docker
Computer Network frameworks
GNS3
Batch Scheduler
Slurm
Document preparation
Latex

References

Ali R. Butt
Yue Cheng
Arnab Kumar Paul
Ahmad Maroof Karimi