Seyed Hassan Yajadda

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Education

Shahid Beheshti University, MSc in Computer Engineering   Sep 2019 – Sep 2022
- GPA: 3.77/4.0
- **Thesis Topic:** "A Novel Congestion Control Mechanism In Complex Networks Based On Reinforcement Learning"
- **Supervisor:** Dr. Farshad Safaei Semnani

Farhangian University, BSc in Mathematics   Feb 2014 – Jan 2018
- GPA: 3.27/4.0

Publications

Yajadda, S.H., & Safaei Semnani, F. (2023). A Novel Reinforcement Learning Routing Algorithm for Congestion Control in Complex Networks. *arXiv preprint*.   Dec 2023

10.48550/arXiv.2401.00297

Research Interests

High-performance Computing

Reinforcement Learning

Machine Learning

Network Science

Projects

Implement A Deep Learning System On An FPGA, System-On-Chip Course
- Implemented an optimal, real-time Tiny YOLO1 object recognition system on DE0-Nano-SoC boards.
- Tools used: C++, Verilog

Implement A Multilayer Neural Network Using The CUDA On The GPU, Parallel Systems Architecture Course
- Implemented parallel multiplication and addition operations using CUDA for improved speed and accuracy.
- Tools used: C, CUDA

Implement the article "Randomly Early Detection Gateways for Congestion Avoidance", Advanced Computer Networks
- Improved queuing efficiency by evaluating and comparing random detection and drop-tail queuing methods.
- Tools used: C++, Python, NS3

Analysis of various social networks using NetworkX, Gephi, Cytoscape, Complex Dynamical Networks
- Identified key influencers and clusters in social networks, facilitating better understanding of information flow.
- Tools used: Python, NetworkX, Gephi, Cytoscape

Experience

Mathematics Teacher, Ministry of Education   Sep 2022 – Now
- Taught mathematical concepts to enhance students' analytical and problem-solving abilities.

Teacher Assistant, Shahid Beheshti University   Sep 2021 – Feb 2022
- Guided students in understanding fault-tolerant systems design through weekly exercises, improved their grasp

of programming concepts.

School Manager, Ministry of Education   Sep 2020 – Sep 2021
- Led a team of educators and managed the academic and administrative activities of the school, implementing innovative teaching strategies.

Mathematics Teacher, Ministry of Education   Jan 2018 – Sep 2019
- Taught mathematical concepts to enhance students' analytical and problem-solving abilities.

Selected Courses

- **Advanced Computer Networks**(19.9/20)
- **Complex Dynamical Networks**(17.41/20)
- **InterConnection Networks**(18/20)
- **Fault-Tolerant Systems Design**(19.25/20)
- **Parallel Systems Architecture**(18.40/20)

Languages

Persian: Native
IELTS Certificate: 6.5 (L:6.5/R:7/W:7/S:6)

Additional Experience And Awards

President of the Mathematical Scientific Association, Farhangian University   2015 – 2018
The founder of Dal scientific magazine, Farhangian University   2015 – 2018

- Full scholarship funding from the Ministry of Education for undergraduate and graduate degrees.

- Ranked in the 1-percentile in the national entrance exam of Iranian universities in the master's and bachelor's entrance exams.

Technologies

Programming Languages: Python, Java, C++, CUDA, Verilog, SystemC

Libraries & Tools: NetworkX, OpenAI, Pandas, Numpy, NS3, Matplotlib, Scrapy, Selenium, BeautifulSoup

Frameworks: Django, DjangoREST

Tools: Gephi, CytoScape, Modelsim, Linux