Shaleen Garg

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Computer Science and Engineering
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Education

Year	Degree	Institute	GPA
2019 (Expected)	CSE Dual Degree	IIIT, Hyderabad	7.3/10.0 (8 semesters)
2014	AISSE, XII (CBSE)	FAIPS (DPS), Kuwait	91.2%
2012	CISCE, X (ICSE)	The Aryan School, Dehradun	87%

Publications

Share-a-GPU: Providing Simple and Effective Time-Sharing on GPUs
Shaleen Garg, Kishore Kothapalli, Suresh Purini
25th IEEE International Conference on High Performance Computing, Data, and Analytics (HiPC), Bengaluru, India, December 17-20, 2018.

GPUScheduler: User Level Preemptive Scheduling for NVIDIA GPUs
Shaleen Garg, Kishore Kothapalli, Suresh Purini
24th IEEE International Conference on High Performance Computing, Data, and Analytics (HiPC-SRS10), Jaipur, India, December 18-21, 2017.

Current Research Projects

Optimizing Floating Point Numbers and their Arithmetic for FPGAs *August'18 - Ongoing*
Dr.Kishore Kothapalli(Associate Prof, IIIT-H) & Dr.Srikanth Sridharan(Senior Developer, Applied Materials Inc.)
- Exploring and modifying Unums/Posits for optimizing floating pointing representation.
- Trying to come up with alternate ways for representing floating point numbers with efficient arithmetic logic.
- Aiming to optimize bit representation, energy impact and implementation area for DSP applications on FPGAs.

Reinforcement Learning for Financial Portfolio Management *August'18 - Ongoing*
Dr.Pawan Kumar(Assistant Prof, IIIT-H)
- Reducing the portfolio management problem to a typical game(MDP).
- Design the agent to predict the price of a commodity after some time using SARSA.
- Let the agent master the game on historical trading data by maximizing the portfolio value.
- Allow the agent to explore by changing the commodities in the portfolio.

Major Projects

Performance Engineering of Wireless IoT Sensors *November'16 - December'16*
Course Project: Dr.Anil Gurijala (Founder CEO of Ashira Labs)
- Designed a low-cost Wireless IoT Boilerplate hardware platform using readily available 8-Bit micro-controller (arduino micro) and other hardware modules.
- The hardware is capable of housing 5-10 sensors (depending on the pins available on the arduino model).
- Tested the designed hardware platform to maximize both data transmission frequency and up-time (of the hardware), when connected to a finite remote power source like consumer "AA" batteries.
- Was successful in keeping the cost of the whole system as low as $22.

Computer Skills

Languages: C, C++, CUDA, Java
Scripting Languages: Python, Bash
Other Tools/Languages: LaTeX
Platforms: Linux
Hardware: Arduino, ESP8266(wifi module)

Positions and Community Service

- Election Commissioner & Member of the **Students Parliament** for academic year 2018-19, IIIT
- **Research Assistant** for Dr. Kishore Kothapalli, academic year 2018-19, CSTAR, IIIT
- **Teaching Assistant** for Distributed Systems(CSE431), Monsoon 2017 & Spring 2018, IIIT
- **Server Administrator** at Center for Security, Theory and Algorithmic Research (CSTAR), IIIT
- **Volunteer** to give weekly science lessons to the local underprivileged children at Ashakiran(Ray of Hope), IIIT
- Runners-Up in Mens Doubles **Table-Tennis** tournament in the annual sports meet 2016, IIIT
- Second Runners-Up in Mens Singles **Table-Tennis** tournament in the annual sports meet 2016, IIIT