AIMLSystems 2022

The 2nd International Conference on Al-MLSystems An Initiative of the COMSNETS Association

October 12-15, 2022

The Chancery Pavilion, Residency Road, Bangalore, India | Hybrid Conference







CONFERENCE











Conference Website: https://www.aimlsystems.org/2022/

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CALL FOR PARTICIPATION

AIMLSystems is a new conference targeting research at the intersection of AI/ML techniques and systems engineering. Through this conference we plan to bring out and highlight the natural connections between these two fields and their application to socioeconomic systems. Specifically we explore how immense strides in AI/ML techniques are made possible through computational systems research (e.g., improvements in CPU/GPU architectures, data-intensive infrastructure, and communications), how the use of Al/ML can help in the continuous and workload-driven design space exploration of computational systems (e.g., self-tuning databases, learning compiler optimisers, and learnable network systems), and the use of Al/ML in the design of socio-economic systems such as public healthcare, and security. The goal is to bring together these diverse communities and elicit connections

Contributions are invited under Research, Industry & Applications, and Demonstration Tracks of the conference. Authors are encouraged to submit previously unpublished research at the intersection of computational / socio-economic systems and Al/ML.

TOPICS OF INTEREST

1. Systems for AI/ML:

- CPU/GPU architectures for AI/ML Specialised/Embedded hardware for AI/ML workloads
- Data intensive systems for efficient and distributed training
 Challenges in production deployment of ML systems
- ML programming models, languages, and abstractions ML compilers and runtime
- Efficient systems for data preparation and processing
 Systems for visualisation of data, models, and predictions
- Testing, debugging, and monitoring of ML applications Cloud-computing for machine and deep learning
- Machine and deep learning "as-a-service"
 Efficient model training, optimisation and inference
- Tiny Machine Learning
 Embedded and Edge Artificial Intelligence
- Distributed and parallel learning algorithms
 MLOps (data collection, monitoring and re-training)

2. AI/ML for Systems:

- AI/ML for VLSI and architecture design
- AI/ML in compiler optimisation AI/ML in data management including database
- optimisations, virtualisation, etc.
 Al/ML for networks design of networks,
- load modelling, etc.
 Al/ML for power management green computing,
- power models, etc.
 Al/ML for Cloud Computing; Al/ML for IOT networks

3. AI/ML for Socio-Economic Systems Design:

- Computational design and analysis of socio-economic systems
- Fair and bias-free systems for social welfare, business platforms
- Applications of Al/ML in the design,
 short-/long-term analysis of cyber-physical systems
 Mechanism design for socio-economic systems
 Fairness, interpretability and explainability for ML
- applications
 Privacy and security in AI/ML systems
- Sustainability in Al/ML systems
- Ethics in Al/ML systems
 Applications of Al/ML in financial systems

CONFERENCE HIGHLIGHTS

- · Keynote/Invited Talks
- Technical Paper Sessions
- Industry Track Session
- · Panel Discussions
- Demos & Exhibits · Doctoral Symposium
- Tutorials

KEYNOTE SPEAKERS



Carlos Guestrin Stanford University, USA



Cynthia Rudin, Duke University, USA



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