

JAYARAM K. RADHAKRISHNAN

Research Scientist and Tech Lead, AI Infra @ IBM Research

📍 Westchester, New York, USA

🌐 www.jayaramkr.com

EXPERIENCE

Research Staff Member

IBM Research

📅 Feb 2014 – Present

📍 Yorktown Heights, NY, USA

Tech Lead on the following projects:

1. Scalable, geo-distributed and private federated learning using homomorphic encryption (current)
2. Hyperparameter selection for deep learning with differential privacy (current)
3. IBM Deep Learning as a Service (DLaaS)
 - Scheduling and Elastic Scaling (2018)
 - Lifecycle Manager (job deployment, resource accounting and failure recovery) (2016-18)
 - Job Monitor (job status monitoring, failure detection and analysis) (2016-18)
4. Causality-based elastic scaling of datacenter applications (2015-16)
5. Trustworthy Geo-Fenced Hybrid Clouds (2014-15)
 - Scalable hardware-rooted (TPM) host, guest OS and application integrity verification and geographic fencing mechanisms into IaaS cloud platforms (OpenStack).
 - Extension of integrity verification, geo-fencing and controlled decryption to Hadoop MR and Spark.

Postdoctoral Researcher

HP Labs

📅 June 2012 – Jan 2014

📍 Palo Alto, CA, USA

1. Distributed programming abstractions for NVRAM-based Datacenters
2. Scalable rule-based datacenter intrusion detection system where rules and correlation patterns are stateful.
3. ElasticRMI – Java RMI with native support for elastic scaling (using Mesos to dynamically increase the number of server objects).

Software Engineer

Lucent Technologies

📅 Aug 2004 – May 2005

📍 Bangalore India

- Developed software modules for the remote management of backbone SONET/SDH optical networks. Users of the software included T-Mobile Germany and service providers in Australia and Saudi Arabia.

EDUCATION

PhD. Computer Science

Purdue University

📅 June 2012

📍 West Lafayette, IN, USA

- Thesis: Engineering Effective Event-based Distributed Systems
- Advisor: Patrick Eugster

MS. Computer Science

Purdue University

📅 Dec 2008

📍 West Lafayette, IN, USA

BE. Computer Science

Birla Institute of Technology and Science (BITS)

📅 May 2004

📍 Pilani, Rajasthan, India

AWARDS

- IBM Outstanding Technical Accomplishment Award, 2019
- Best Paper Award, MIDDLEWARE 2013
- Best Paper Award, MIDDLEWARE 2010
- Maurice H. Halstead Award for Outstanding Research in Software Engineering, Purdue University, 2011

PUBLICATIONS

- 24 conference papers, 5 journal papers
- DBLP : <http://bit.ly/2ZZmcin>
- PDFs of papers: <http://www.jayaramkr.com/publications>
- 4 patents issued, 5+ pending
- Issued patents: <http://bit.ly/2twSCop>

TECHNICAL SKILLS

- Go, Kubernetes, Microservices
- Prior experience (rusty) : Scala, Spark, Map Reduce
- Novice : PyTorch and TensorFlow