Saurav Nanda

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EDUCATION

2014 – 2018	**Purdue University, USA**	*Ph.D. (GPA: 3.92/4) Computer & Information Technology*
2007 – 2009	**IIT, Kharagpur, India**	*M.Tech., Information Technology*
2003 – 2007	**SIT, Tumkur, India**	*B.E., Computer Science*

PUBLICATIONS

[1] Resource-Aware Container Consolidation using a Deep Learning Approach. In *27th ACM HPDC Workshop (MLCS)* 2018.

[2] TAG: Traffic-Aware Global Live Migration to Enhance User Experience of Cloud Applications. In *9th IEEE CloudCom* 2017.

[3] Predictive model for dynamically provisioning resources in multi-tier web applications. In *8th IEEE CloudCom* 2016.

[4] Predicting Network Attack Patterns in SDN using Machine Learning Approach. In *IEEE NFV-SDN* 2016.

[5] Forensics as a service: Three-tier architecture for cloud based forensic analysis. In *IEEE ISPDC* 2016.

[6] A quantitative approach towards detection of an optimal attack path in a wireless network using modified PSO technique. In *IEEE COMSNETS 2009*.

[7] An ACO based approach for detection of an optimal attack path in a dynamic environment. In *ACM ICDCN 2010*.

SOFTWARE SKILLS

LANGUAGES	Python (Tensorflow, Scikit), R, Matlab, C, PHP, Java
HYPERVISORS	ESXi, KVM, QEMU, Xen
DATABASES	MySQL, Oracle, MongoDB, Hive, Hbase, Cassandra
CLOUD & MISC	Hadoop, MapReduce, Azure, Docker, AWS, OpenStack, git
WEB & TOOLS	Weka, XML, JSON, Node.js, HTML5, CSS, JS, JQuery

RESEARCH INTEREST

Cloud Infrastructure, Dynamic Resource Provisioning, SDN, Machine Learning

WORK EXPERIENCE

JUNE 2018 – NOW

R&D Engineer, Sr. II
Synopsys, USA

Working as a core member to develop a adaptive job scheduler (similar to Borg), using machine learning approach, for EDA jobs. Prime target is to improve the turn-around time for executing Zebu emulation and grid jobs.

JUNE 2017 – AUG 2017

Data Science Intern
Synopsys, USA

Working on a multi-resource grid scheduling algorithm that can pack jobs with hosts depending upon their individual resource requirement. Leveraged TensorFlow based RNN algorithm to pack the jobs in an optimal way.

AUG 2014 – MAY 2017

Graduate Research/Teaching Assistant
Purdue University, USA

Managing the HPC Lab, that includes a small data center. Deployed and maintained ESXi and OpenStack based clusters to perform HPC and cloud-based research experiments. Managed 24 OpenStack based Hadoop clusters using Sahara package for Big-Data Analytics course (CNIT 581) in Fall 2015. Also, Teaching Assistant for HPC courses (CNIT 460 & 560) that involved setting up small clusters with a NFS filesystem, run MPI, and implement the Torque scheduler.

JUNE 2015 – AUG 2015

Summer Intern
University of Stavanger, Norway

Implemented a scheduling algorithm for live migration of virtual machines to improve the user experience of the applications hosted in cloud environment. Deployed an OpenStack Cloud infrastructure to host more than 15 Hadoop clusters.

JAN 2011 – JULY 2014

Chief Technology Officer (CTO)
Abhitech IT Solutions, India

Led the technical front of an emerging start-up company for more than four years, and handled clients across the globe. Delivered more than 10 big and 40 small projects with a team of 20 engineers. Expertise in Customized Web Application and Mobile Application (iOS, Android) Development.

AWARDS AND ACHIEVEMENTS

OCT 2016	2nd Prize in Black IronHack 2016, Purdue University, RCODI
APRIL 2016	2nd Prize in Green IronHack 2016, Purdue University, RCODI