New Frontiers in Cloud Computing for Big Data and Internet-of-Things Applications

by Ashish Thomas | Mar 27, 2017 | Distinguished Lectures, Happenings, Latest |

[Image of two people at an event]
Prof. Rajkumar Buyya, Director, Cloud Computing and Distributed Systems (CLOUDS) Lab, The University of Melbourne, Australia and CEO, Manjra Soft Pvt. Ltd, Melbourne, Australia delivered a Distinguished Lecture titled “New Frontiers in Cloud Computing for Big Data and Internet-of-Things (IoT) Applications” on March 27, 2017 at the University of Hyderabad (UoH). More than 450 of students, faculty and staff of UoH attended this interesting talk that lasted for about 90 minutes.

Prof. Rajkumar while delivering the distinguished lecture said, “Computing is being transformed to a model consisting of services that are commoditized and delivered in a manner similar to utilities such as water, electricity, gas, and telephony. Several computing paradigms have promised to deliver this utility computing vision”. He also stated, “Cloud computing has emerged as one of the buzzwords in the IT...
industry and turned the vision of ‘computing utilities’ into a reality’. Clouds deliver infrastructure, platform, and software (application) as services, which are made available as subscription-based services in a pay-as-you-go model to consumers, he added.

Prof. Rajkumar opinioned, “Cloud application platforms need to offer (1) Application program interfaces (APIs) and tools for rapid creation of elastic applications and (2) a runtime system for deployment of applications on geographically distributed computing infrastructure in a seamless manner”. “The Internet of Things (IoT) paradigm enables seamless integration of cyber-and-physical worlds and opening up opportunities for creating new class of applications for domains such as smart cities”, he added. He further said, “the emerging Fog computing is extending Cloud computing paradigm to edge resources for latency sensitive IoT applications”.
The presentation by Prof. Rajkumar covered (a) 21st Century vision of computing and identifies various IT paradigms promising to deliver the vision of computing utilities; (b) opportunities and challenges for utility and market-oriented Cloud computing, (c) innovative architecture for creating market-oriented and elastic Clouds by harnessing virtualization technologies; (d) Aneka, a Cloud Application Platform, for rapid development of Cloud/Big Data applications and their deployment on private/public Clouds with resource provisioning driven by SLAs; (e) experimental results on deploying Cloud and Big Data/Internet-of-Things (IoT) applications in engineering, and health care, satellite image processing, and smart cities on elastic Clouds; and (f) directions for delivering our 21st Century vision along with pathways for future research in Cloud and Fog computing.

Vice-Chancellor, Prof. Appa Rao Podile presided and felicitated the guest. Prof. Arun Agarwal, Dean, School of Computer and Information Sciences gave the welcome and introduced the speaker. Prof. Rajeev Wankan, faculty in Computer Science proposed the vote of thanks.

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