

IEEE IRI 2014 Invited Industry Talks (I)

Managing Shared Information in Multi-Tenant Service Provider Applications

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Abstract

Service provider applications, for example in the form of Software-as-a-Service are different from traditional enterprise software systems because they need to enable serving multiple customers at a time with a shared infrastructure. While the property of multi-tenancy refers to the isolation of different customers on a shared system, multi-customer support enables a service provider to add value by taking advantage of different customers being (virtually) collocated in the same application. This can be used for efficiency purposes, which is important e.g. to render services based on data or infrastructure of multiple accounts, or analyze operations data from different accounts to gain common insights. This is quite common, e.g., in the case of service management systems such as help desk ticketing in which service provider employees work on problem tickets of different client companies but these tenants are isolated from each other. Alternatively, this also enables a service provider to share curated data that customers can pair with their own sources to gain insights, a typical big data application. This presentation will discuss issues of managing access in this scenario of multi-tenancy with controlled sharing of data and presents an approach to address this problem.

Biography:

Heiko Ludwig is a Research Staff Member with IBM's Almaden Research Center in San Jose, CA and leads the Cloud Management Services team in the Cloud and Synaptic Systems organization, working on issues of service and storage management for Cloud environments. Prior work addressed various issues of service and process management and the corresponding platforms, mostly relating to large scale, crossing organizational boundaries, and the interrelationship of business and IT, such as work on WSLA, WS-Agreement and CrossFlow. Heiko has published more than 100 refereed articles, conference papers, and book chapters as well as technical reports. He is a managing editor of the International Journal of Cooperative Information Systems, has served on about 150 program committees and co-organized workshops resp. served as PC Co-Chair and General Co-Chair on a number of conferences. He also gave a number of keynote speeches at conferences and workshops in the field. He represented IBM in the OGF GRAAP working group, publishing the WS-Agreement standard. Prior to the Almaden Research Center, Heiko held different positions at IBM around the world.

IEEE IRI 2014 Invited Industry Talks (II)

Addressing volatile and long-tail data challenges in Product Search

Nish Parikh

Creative Engineer, Data Scientist
eBay Research Lab

Abstract

The user expectations for e-commerce search are quite different from that of conventional web search. Product descriptions are concise as compared to traditional web documents. The expectation of users is to find the right products, do product comparisons and more importantly make purchases. Several research challenges appear in this context. Some of them are because of the fact that seller and buyer vocabularies differ considerably. Several others arise because of the volatility of the inventory and the long and sparse tail of query and user intent distributions. In this talk, we describe approaches adopted to address various challenges in the areas of query segmentation, concept extraction from queries, query suggestions as well as improving recall and ranking for low and zero recall queries. The talk will also describe best practices in cleaning, handling, processing and using big data for search applications.

Biography:

Nish Parikh currently heads the Data Science Team at eBay Data Labs. Prior to that he was a Senior Staff Researcher at eBay Research Labs where he led research in query analysis, product search and large-scale data processing. Before eBay Research Labs he was part of the Search and High Performance Computing Group that launched the then eBay's Next Generation Search Engine Voyager. Prior to joining eBay, Nish received an M.S. in Computer Science from University of Southern California and a B.S. in Electrical Engineering from Gujarat University, India where he was awarded a gold medal for academic excellence. Nish has published in premier conferences such as SIGIR, KDD, WWW, CIKM and WSDM. In addition to the research community engagement, Nish has been an invited speaker at tutorials, panels and other industry forums at CIKM, IEEE Big Data, ER2013, Hadoop Summits as well as ACM Data Mining SIG events.

IEEE IRI 2014 Invited Industry Talks (III)

End to End Application Security with Oracle Database Real Application Security, Oracle 12c

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Abstract

Oracle Real Application Security (RAS) is a database authorization framework that enables application architects to define, provision, and enforce application-level security policies at the database layer. It introduces three core features: (1) application end-users and their sessions within the database kernel, (2) application-level security policy constructs such as application-defined privileges and application roles, which can be provisioned in external identity stores, and (3) efficient fine grained access control on data using SQL transformation techniques. Oracle RAS is targeted to simplify application development with a declarative security policy model as well as to provide stronger data security as it is enforced regardless of database entry points: direct, middleware, or 2-tier tools such as patching and analytics. In this talk, we present the primary features of Oracle RAS and its architecture.

Biography:

Tanvir Ahmed is a Principal Member of Technical Staff with the Database Security Group, Oracle, USA. He has worked over 9 years on several products within the core database security group and is the principal developer for Oracle Real Application Security (RAS), Oracle 12c. He received the B.S. degree in computer science from the University of Mississippi, Oxford, and the M.S. and Ph.D. degrees in computer science from the University of Minnesota, Twin Cities. He has published over 20 refereed papers including papers in ACM TISSEC, ACM TOSEM, ACM SACMAT, IEEE PerSec, IEEE ICDCS, and IEEE ISADS.

IEEE IRI 2014 Invited Industry Talks (IV)

Rajesh Subramanyan

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