Vivek R. Shivaprabhu

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Headline: Geo-Spatial Data, Web Semantics, Data Mining, Information Retrieval, Scientific Visualization, Data Governance and Strategy, Agile Development

Education:

Doctor of Philosophy (PhD), Computer Science	Expected to graduate Aug 2020
University of Illinois at Chicago	Current GPA 3.82/4
Data and Web Semantics, Machine Learning, Data Mining	

Master of Science, Computer Science	Aug 2006 to Sep 2008
University of Illinois at Chicago	GPA 3.87/4
Web and Data Mining, Graphics and Animation, Scientific Visualization	

Bachelor of Engineering, Computer Science	Aug 2000 to May 2004
Visveswaraya Technological University, Karnataka	

Skills:

Languages	C#/.net, Java, C++, Python
Databases	SQL Server, Oracle, DB2, MarkLogic
ETL and IR Tools	SQL Server Integration Services, IBM DataStage, WebQL
MDM Tools	Stibo Step (PIM), Infor Epiphany (CRM), Oracle Fusion PLM

Experience:

Software Developer: April 2015 to June 2016
Simplex Investments, Chicago IL

- Designed and implemented high frequency trading applications for stock and options.
- Implemented machine learning -based decision tree algorithms and other homemade strategies using C++ to enable sub-millisecond Buy/Sell decisions for automated trading in the stock/options markets.

Technical Solutions Architect: 2008 to March 2015
Codifyd Inc. (previously ByteManagers), Chicago IL

- Single handedly architected and built a Product Information Design and Authoring software (C# 4 and Sql Server) that enables Data Analysts to design complex Product Schemas, build and normalize Product Data.
- Instrumental in taking the organization from a 12-person team who used Excel to manipulate data in 25K Products to a 200 people team who rely on the tool to service over 5M Products across >10K categories for multi-billion dollar clients.
- Architected and implemented a Precise Search Engine that is capable of parsing search terms and applying facets intelligently based on predefined product schemas for a complex taxonomy (typically distributors).
- Responsible for building a data-warehouse to hold product data, as well as collateral such as Brochures, Catalogs, Diagrams and other assets related to the SKUs; and make it search-able.
- Helped 'productize' several technical consulting services including PIM Selection, Enterprise Search Implementation, etc.
- Actively participated the growth strategy for the company and the software development practice.

Software Engineer: 2004 to 2006
Infosys Technologies Ltd., Bangalore India

- Designed and Developed Extract-Transform-Load (ETL) jobs for a global client.
  - Reduced the time taken by the daily loads from 2 hours to 20 minutes in production.
  - Within initial six months of employment, became responsible for go-live and production issue management. This required international travel to client locations
- Developed several modules in a CRM (Customer Relationship Management) Sales application.
  - Implemented complex business rules to automatically procure the best opportunity to contact.
  - Developed bulk import jobs to migrate from Siebel to Epiphany.

Selected Software Solutions:

Architected and implemented a Product Information Design and Authoring software suite which enables Data Analysts to design and manage complex Taxonomies, Product Schemas, Images and Product Data. This suite integrated with the Bridge tool which maps schemas and product data from multiple sources (manufacturers) to multiple destinations (distributors). Originally built for internal consumption, this software was sold as a SaaS application to several industrial supply distributors to manage millions of SKUs across thousands of categories.

Developed an in-house Search Engine designed specifically for product data that allows the end user to type natural language queries and uses domain knowledge and rich meta data to decipher context from the myriad possible use cases. Designed for speed and implemented using no-Sql to allow for non-restrictive schemas.

In Analysis of News Articles using Meta-Search Engines, for any given query, we wish to find the critical differences between the liberal and the conservative newspapers. It is an attempt to identify the issues differentiating the liberals from the conservatives. It is interesting to see how a controversial topic (such as 'Stem Cell Research') receives opposite opinions in different newspapers.

Search Engine Analysis: Find, for a given query, which of the search engines - Google, Yahoo!, MSN Live - will give more satisfactory results. Some very interesting results were obtained. Google is in the forefront, capturing at least 70% of the hearts of people, being the best for Sports and Games. Using MSN Live is a good choice for Shopping (they have some interesting review consolidation techniques). Yahoo! is lagging behind and needs to catch up one field at a time.

Tornado Data from 1950 to 2005 in the states of mainland USA was visualized using VTK. This application can show tornadoes in a specific state or the entire country. Tornadoes with a specific or a range or F-Values are color coded. A playback of how the tornadoes occurred over time can be seen. This can help in analyzing and predicting patterns.

Selected Engagements:

Data Store, eCommerce Portal and Search Implementation – Top 10 Industrial Distributor: Architected an in house database schema to store world class data for over 3 million products, implemented Solr for search and browse using advanced category-specific navigation and filters for thousands of nodes in 18 top level categories. Designed custom tools to import new products from master data sources on a schedule. Developed an advanced search algorithm that intelligently navigates to custom taxonomy and brand landing pages, detects manufacturer and competitor part numbers, and provides features to slice and dice the data set using on-the-fly filters that help users navigate the web site with ease.

Data Optimization and Migration: Design and Implementation – Top 10 Industrial Distributor: Designed a data migration solution as part of a MDM (Master Data Management) tool implementation for a large industrial supply distributor. Existing data was being fetched from a legacy PIM system, a green screen system, and a catalog publishing system. The project was divided into two phases with phase 1 being a high-level cleanup of over half million SKUs in over 40 top-level categories and phase 2 being a multi-year deep dive of specific categories to introduce landing page content, enriched schemas and lists of values, and high fill rates to support faceted navigation. All business objects being migrated including taxonomy, schemas and attribute values were tracked using audit trails when changes were made to category names, attributes and restricted lists of values to ensure that links to the existing catalog system were maintained. Led a team of developers and analysts to implement an end-to-end solution to extract data from all sources, maintain referential integrity during transformation and enrichment, and to load all data and meta data into the new environment. The successful completion of phase 1 led to the design of a repeatable suite of patterns and practices that was used to generate load files for the deep dive exercise over several years.

Siebel-Epiphany Migration (SME) – Top 3 multinational financial services organization: The primary goal of this project is to provide an integrated contact and account management system using the Epiphany Sales package (A Java Based CRM Package). The critical data from the existing Siebel system will be migrated to the new system to ensure business continuity. The client was exalted by our performance in this project and extended 6 other projects to our team.