

Shashank Khandelwal

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Work Experience

Optical Image Technology

July 2008 – present

Software Engineer

State College, PA

The company's primary product is DocFinity, a business process management and document management system.

- Designed and implemented a version history system that tracks markup, metadata and file changes to documents in DocFinity. Such histories are used as audit trails and to understand the evolution of documents.

Technologies used: Java, Spring and Hibernate

- Added the ability to print and fax multiple documents directly from DocFinity's web interface. The system can be set up so that large print and fax jobs can be sent to, and processed on, non user-facing DocFinity servers.

Technologies used: Captaris RightFax, Java

- Actively involved in debugging and solving problems with the DocFinity application under heavy load. The challenges tackled have involved investigating database deadlocks, high application latency, and determining database connection pool and scheduler thread pool sizes.

Technologies used: YourKit, JMeter, Oracle, Quartz and Microsoft SQL Server

Twyga.com

Jan 2010 – present

Founder

State College, PA

- Conceived, designed and implemented a travel community web product. Twyga.com provides hand-crafted travel itineraries, saving travelers weeks of research by providing tried and tested guides to exciting destinations. The product also provides the ability for users to submit itineraries, and to discover new destinations based on interests and activities. *Technologies used: Python, Django, MySQL*

New Pig Corporation

May 2008 – July 2008

Software Engineer

Tipton, PA

- Responsible for configuring, deploying and maintaining the IBM OmniFind software that provides search capability for the redesign of the newpig.com website.
- Identify and resolve numerous issues with the purchasing and billing features of the new website.

Technologies used: IBM Websphere Commerce, Java, JSP, and JavaScript

Orbitz Worldwide

May 2006 – Apr 2008

Software Engineer II (Dynamic Packaging)

Chicago, IL

- One of two primary developers involved in the design and implementation of a repeat customer discount program for vacation packages. My contributions include designing and implementing significant changes to the packaging API and search engine. The most significant project for our team in 2007, this feature has successfully released to production with 5 million members. *Technologies used: Java, JSP, and SQL.*
- As part of a personal quality initiative, I designed and implemented an exception count monitoring application. This tool is now in use by several teams and assists in identifying and investigating issues in production. *Technologies used: PHP, Python, UNIX shell scripting.*
- Provided primary production support 24/7 during on-call rotations for dynamic packaging applications.
- Received the *Power of Many Award* twice (2007, 2008) in recognition of significant performance and contributions.

Ambion, Inc.

Jun 2005 – Aug 2005

Web Programmer Intern

Austin, TX

- Implemented numerous enhancements to the main website's search functionality. This included devising an adaptive search system that provides users with popular links based on their search terms. The system logs keywords and the resultant links that are clicked on. Learning from this user behavior, the system returns the more popular results at the top of the page. *Technologies used: PHP, MySQL, CSS, HTML and JavaScript.*

SQL Star International

Feb 2004 – Jun 2004

Software Engineer Trainee

Hyderabad, India

- Member of a five person team that maintained and developed web-based policy and claims administration software for the Florida homeowner's insurance industry. My responsibilities primarily included identifying the root cause of issues with the system and implementing appropriate solutions.

Technologies used: Java, JSP, Oracle, and IBM Websphere.

- Actively involved in the development of a web portal to high-performance visualization services. I developed a portal website that allows users to schedule sessions that allow exclusive, interactive access to web-enabled dataset selection and rendering services. *Technologies used: Python, C, PHP, the Globus toolkit and UNIX shell scripting.*
- Rapidly prototyped software to improve user interaction with mechanical theorem provers. Working in a two-person team, we designed and implemented algorithms to perform domain-specific pattern matching on the expression trees of LISP formulas. We developed an interactive program to visualize the expression trees and the output from the pattern matching software. This work resulted in a publication in *IEEE Symposium on Information Visualization*. *Technologies used: Lex and Yacc, C++, Qt and OpenGL.*

Skills

- Languages: Java, PHP, Python, C, HTML, C++, JSP, JavaScript
- Development Tools: Accurev, shell scripting (bash), YourKit, Apache Subversion
- Software: Familiarity with Microsoft SQL Server, MySQL and Oracle

Education

University of Iowa, Iowa City Master of Computer Science May 2006

- Added on-demand application downloading and endian awareness to the Network Infrastructure for Combinatorial Exploration which supports nagging and partitioning for distributed heuristic search algorithms.
- Contributed to the creation of a web-based interface to data from a hydrologic forecast verification effort. This work resulted in a publication in *Computers and Geosciences*.

University of Texas, Austin BS Computer Sciences and BA Mathematics Aug 2002

Publications

- S. Bansal, S. Khandelwal, L.A. Meyers (2009) Exploring Biological Network Structure with Clustered Random Networks. *BMC Bioinformatics* **10** (405)
- A. Kruger, S. Khandelwal, A. Bradley (2007) AHPSVER: A Web-based System for Hydrologic Forecast Verification. *Computers and Geosciences* **33**, 739-748
- C. Bajaj, S. Khandelwal, J. Moore, V. Siddavanahalli (2003) Interactive Symbolic Visualization of Semi-automatic Theorem Proving. *IEEE Symposium on Information Visualization*.