

Umar Qasim

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Education

- 2005 - 2010 **Ph.D. in Information Systems**
New Jersey Institute of Technology, USA
Dissertation Topic: Active Caching for Recommender Systems
- 2003 - 2004 **MS. in Information Systems**
New Jersey Institute of Technology, USA
Thesis Title: Digital Libraries and Middleware Architecture
- 1997-1999 **MBA in Management Information System**
Hamdard University, Pakistan
Thesis Title: Library Automation, Opportunities and Challenges
- 1994-1997 **BS. in Computer Science**
Hamdard University, Pakistan
Recipient of Excellence Award

Teaching/Research Interests

Information Systems(Management, Evaluation)
Data Management (Databases, Data optimization, Data structure)
Application Development (Web/software development, Programming languages)
Knowledge Management (Information retrieval/extraction/filtering, Text/data Mining)
System Analysis and Design (Requirement engineering, Software engineering)
Information Collection (Digital libraries, Content management)

Experience

Teaching

- 09/10-
Present **Dalhousie University, Canada**
Part-time Lecturer
Teaching Introduction to Computers course in the Faculty of Computer Science.
- 1/09-05/09 **McMaster University, Canada**
Sessional Lecturer
Taught Information Systems in Business course at DeGroot School of Business during Winter 2009 semester.
- 1/06-08/06 **New Jersey Institute of Technology, USA**
Teaching Assistant
Taught Evaluation of Computer Applications / Information System Evaluations in Spring and Summer semester at the College of Computing Sciences
- 1/99-6/00 **University of Management & Technology, Pakistan**
Adjunct Professor
Taught Database Management, System Analysis & Design, Management Information Systems and Computer Applications to graduate and under-graduate students.

Industry

- 01/11 -
Present **Dalhousie University, Canada**
Associate Director, University Web team
Working in the above position seconded to the university web team to redesign university website and university portal site. Responsible for leading information architecture and usability efforts. Activities include defining site structure, navigation, and page layout by creating site maps and wire frames, writing use cases and UI specifications, assessing interface usability, and managing content inventories.

- 8/09 - Present **Dalhousie University, Canada**
Technologist, University Library
 Lead the user interface development of the libraries' web-based services, digital imaging, database development projects and data services. Design and conduct user studies to properly evaluate various public interfaces, and evaluate results in order to recommend and implement system improvements. Participate in the development, maintenance and configuration of the infrastructure supporting technology-based services of the Libraries installation and the configurations of web servers and related applications.
- 10/08-8/09 **McMaster University, Canada**
Digital Initiatives Research Intern, University Library
 As part of Digital Library group, investigated various aspects of Endeca information access platform to be used in digital libraries. Also developed a recommender system prototype for the library catalog using state of the art technologies.
- 9/01-12/04 **Reason Technologies, USA**
Analyst Programmer
 Architected and developed information systems for various client companies. Developed the Active Server Pages and COM components for these applications. Worked with Visual Basic, Visual InterDev, ADO, SQL Server, VB Script and JavaScript to build the software. Responsibilities included design, development and implementation of projects and leading a team of developers. Developed and implemented projects before the designated time in a tight schedule. Mentored the developer team, guiding them throughout the ongoing projects.
- 8/00-8/01 **SoftSource Inc., USA**
Programmer / System Analyst
 Worked on B2B application for SolutiaNet that provides intelligent business solutions to help analyze, optimize and organize businesses. Application contains information about business and industrial products and services, auction and exchange market, consulting services, educational courses, user training and technical support. This project required upfront planning, analysis, design and development. Developed web pages using ASP, VBScript, Microsoft Visual Interdev, whereas the back-end database work was done in SQL Server.
- 7/98-6/00 **University of Management & Technology, Pakistan**
Analyst Programmer
 Responsible for the development of software applications for the internal departments of this organization. For Client/Server applications used Visual Basic and Microsoft Access. For 3-tier compliant software used Microsoft Transaction Server as a middle tier, SQL Server 7 as database and thin client user interface using ADO Object Model for Visual Basic 6. Involved in the total software life cycle from depicting business flow charts, data model, Entity-Event relationship, and developing business objects and coding for the same.
- 7/97-6/98 **Bata International, Pakistan**
Programmer
 Designed and programmed custom software for Finance department. The system kept the information of all the payments from the retail stores and agencies through out Pakistan. This information was reconciled through biweekly statements. All the transactions in the Bank accounts and reconciliation with these accounts regarding stores and agencies were managed through this software. Skills included extensive Microsoft Access including extensive Visual Basic programming and subroutine design. Involved in all phases of System development life cycle.

Research

- 1/05-08/08 **National Science Foundation / National Science Digital Library Research Grant**
New Jersey Institute of Technology, USA
 General Recommendation Engine(<http://gre.njit.edu>)
 Research Assistant
 The General Recommendation Engine (GRE) provides recommendations for the National Science Digital Library collections. GRE is developed by combining three next generation approaches to recommendations: collaborative-filtering, content-based and knowledge-based recommendations to craft the best set of links to related information. For this web-based application developed three recommendation engines using visual studio .net, c#, vb.net, visual C++, asp.net and SQL Server. Also developed and integrated NJIT library, DLESE, Econport and Teachers Domain demo websites with GRE.
- 1/04-12/04 **National Science Foundation / National Science Digital Library Research Grant**
New Jersey Institute of Technology, USA
 Digital Library Service Integration(<http://is.njit.edu/dlsi>)
 Research Assistant
 The Digital Library Service Integration (DLSI) infrastructure provides a systematic approach for integrating digital library collections and services. Developed applications for lightweight integration between heterogeneous systems in digital libraries. Lightweight integration is

achieved by the use of wrappers to identify similar concepts in diverse systems and provide information and services for these items of interest. Used Java and MySQL for implementation.

Honors & Awards

- 1/05-8/08 National Science Foundation Research Grant, NJIT, Newark, NJ
Funding award for research as a PhD student
- 12/04 - Present Membership
Association of Information Systems
- 12/04 - Present Membership
The Sigma Chapter of the Alpha Epsilon Lambda Honor Society of Graduate and Professional Students at NJIT
- 8/99 Dean's award
For achievement during MBA degree
- 8/97 Excellence award
For outstanding performance in BS degree

Publications

Hyuck Han, Michael Houle, Vincent Oria and **Umar Qasim**.(2011). Caching without Replacement for Approximate Similarity Search. PVLDB(To be Submitted).

Umar Qasim, Vincent Oria, Yi-Fang Wu, Michael Houle and M. Tamer Özsu.(2011). A Partial Order Based Active Cache for Recommender Systems. ACM Transactions on the Web (Submitted).

Michael Houle, Vincent Oria, **Umar Qasim**.(2010). Active Caching for Similarity Queries Based on Shared-Neighbor Information. In Proceeding of the 19th International Conference on Information and Knowledge Management. October 26-30, 2010, Toronto, Canada.

Umar Qasim (2010). Using Recommender Systems to Reduce Information Overload in Institutional Repositories. Islandora Camp. July 22-23, 2010, Prince Edward Island, Canada.

Umar Qasim, Vincent Oria, Yi-Fang Wu, Michael Houle and M. Tamer Özsu.(2009). A Partial Order Based Active Cache for Recommender Systems. In Proceeding of the 3rd ACM Conference on Recommender Systems. October 22-25, 2009, New York, USA.

Yi-fang Wu, Il Im, Todd Will, **Umar Qasim**, Michael Bieber and Vincent Oria. Poster Abstracts NSDL Annual Meeting 2007 Washington, DC November 6 – November 8, 2007

Yi-fang Wu, Il Im, Todd Will, **Umar Qasim**, Michael Bieber and Vincent Oria. Poster Abstracts NSDL Annual Meeting 2006 Washington, DC October 18 – October 20, 2006

Umar Qasim. *Active Caching for Recommender Systems (2010)*. Ph.D. Dissertation. Information Systems Department, New Jersey Institute of Technology, USA, November 2010.

Umar Qasim. *Digital Libraries and Middleware Architecture (2004)*. MS.IS Thesis. Information Systems Department, New Jersey Institute of Technology, USA. December 2004.

Umar Qasim. Library Automation, Opportunities and Challenges(1999). MBA Thesis. Hamdard University, Pakistan. August 1999.

Software Skills

Programming languages: Visual Basic, C#, Java, C++, SQL, VBA
Databases: SQL Server, Oracle, My SQL, DB2, MDEX, MS Access, Visual FoxPro
Packages: Endeca Information Access Platform, SAS Business Intelligence, SPSS
Interactivity: Flash, Photoshop
Web/Internet: CQ5, Joomla, Dream weaver, FrontPage, ASP. NET, PHP, JSP, Java Script
Data Connectivity: ADO.NET, DAO, ODBC, COM, DCOM, MTS
Other: Visual Studio, Word, Excel, PowerPoint, Outlook, Acrobat

References

Available upon request...