

Behrouz Minaei-Bidgoli

Phonetic: (Bay-ruze Min-eye)

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Education

- Ph.D.** Computer Science and Engineering
(2/2001-12/2004) Michigan State University (GPA: 3.76/4.0)
Research area: "Data Mining for Web-based Educational Systems"
Advisor: Dr. William F. Punch
- Computer Engineering (Software)
- M.Sc.** Iran University of Science and Technology, Tehran, Iran (GPA: 3.47/4.0)
(9/1995-1/1998) Thesis title: "Expert Database for Rijal Science"
- Mathematics for Computer Science
- B.Sc.** Azad University, Qom, Iran (GPA: 3.54/4.0)
(9/1986-1/1991)
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Research Experiences

- Research Assistant** Division of Science and Mathematics Education
(2/2001-present) College of Natural Science - Michigan State
Research and development of data mining techniques
Ref. : Dr. William Punch (punch@cse.msu.edu),
Dr. Gerd Kortemeyer (korte@lite.msu.edu)
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Professional Experiences

- Team Developer Lead** Computer Research Center for Islamic Sciences, Qom
(2/1996-1/2001) Developed and delivered five Digital Library and Encyclopedia products. (See Projects.)
- Project Manager** Computer Research Center for Islamic Sciences, Qom
(10/1996-6/1998) Managed development of six Digital Library, Encyclopedia and publishing software. (See Projects.)
- Research Developer** Computer Research Center for Islamic Sciences, Qom
(1/1994-5/1996) Designed a new algorithm for data compression, particularly in Arabic and Farsi texts. (See Projects.)
- Developer** Computer Research Center for Islamic Sciences, Qom
(6/1991-12/1993) Developed Arabic search engine, dictionary and word processor. (See Projects.)
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Teaching Experiences

- | Instructor | Course and Location |
|---------------|--|
| (Spring 2000) | Data Storage and Retrieval, Computer Research Center for Islamic Sciences, Qom |
| (Spring 1999) | Data Structure Using C++, Qom University, Qom |
| (Spring 1998) | Artificial Intelligence, Technological and Professional Institute, Qom |
| (Spring 1997) | Foundation of Computer Science and Programming, Qom University, Qom |
| (Summer 1996) | Assembly Language of i8086, Computer Research Center for Islamic Sciences, Qom |
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Skills

- **Programming:** C, C++, Assembly, Perl, Pascal, ASP, Java and C#
- **CAD:** MATLAB, Rational Rose (UML), SELECT (SSADM)
- **IDEA:** Visual C++, Visual Studio .NET, FoxPro and Visual J++
- **OS:** Win2k AS, Windows XP, Red Hat Linux, SCO Unix, Novel Netware and Sun Solaris
- **Database:** SQL Server, Oracle, MySQL and Sybase
- **Software Development Platforms:** .NET and J2EE.
- **Software Technologies:** XML, DCOM, COM, ASP, ActiveX, HTML, CORBA and JavaScript.

Projects

LON-CAPA (Data Mining) (2/2001-present)	Research Developer	Studied and developed data mining for a web-based educational system Learning Online Network with Computer Assisted Personalized Approach, (LON-CAPA), using Perl modules for an Apache server under Linux, and MySQL for implementing Classification Methods, Clustering Ensembles and Association Rule Mining (http://www.lon-capa.org/).
LON-CAPA (Genetic Algorithms) (10/2002-5/2004)	Research Developer	Optimizing classification combination using MATLAB toolbox for genetic algorithms. Member of the Genetic Algorithm and Application Research Group (http://garage.cse.msu.edu/).
Expert Database for Rijal Science (2/1999-12/2000)	Architect and Lead Team Developer	Designed and led a team of seven developers to implement an expert system for Rijal science using Visual C++ 6.0. An internal database engine product was used for data storage and extremely fast data retrieval. Machine learning techniques such as rule based decision methods and HCI were incorporated in this expert database (http://www.noorsoft.org).
Encyclopedia of Islamic Law, Logic, Philosophy and Tradition (2/1996-8/1997)	Architect and Lead Team Developer	Designed and led a team of 20 developers to implement 3 products including a digital library of 450 volumes of Islamic Law and Principals books, 60 volumes of Logic and Philosophy and 442 volumes of Islamic Tradition with flexible search and publishing capabilities using Visual C++, FoxPro and Assembly Language. An internal database engine product was used for data storage and extremely fast data retrieval.
Multimedia Encyclopedia of Holy Quran (2/1997-9/1998)	Lead Team Developer	Led a team of 12 developers to implement the first multimedia encyclopedia of Holy Quran, commentaries and traditions using Visual C++. An internal database engine product was used for data storage and extremely fast data retrieval. UML was used to model and analyze the system.
Data Compression Engine for Arabic and Farsi texts (5/1995-2/1996)	Research Developer	Developed and implemented a data compression algorithm for Arabic and Farsi text. This work was awarded by the Presidential 13 th International Khwarizmi award for contribution in a new algorithm for data compression and a new search engine for extremely fast data retrieval.
Encyclopedia of Islamic Prayers, History and Literature (8/1997-5/1998)	Project Manager	Managed development and delivery for five digital library products including: Encyclopedia of Islam History, Library of 162 volumes of English books, Encyclopedia of Islamic Prayers, Encyclopedia of Islamic Mysticism and Islamic Bibliography and Biography Encyclopedia.
Holy Quran Publishing Software (6/1997-12/1997)	Project Manager	Managed development of publishing software to print high quality Quran text with different Arabic calligraphies.
Arabic-Arabic Dictionary and Thesaurus (7/1994-6/1995)	Developer	Developed an Arabic-Arabic dictionary in a team of 6 developers by extracting data from 20 volumes of Arabic dictionaries and thesauruses. Intelligent Arabic language specific root extraction algorithms were developed for this purpose.
Arabic Object Oriented Search Engine (7/1992-10/1993)	Developer	Developed a high performance search engine and database in a team of 10 using object-oriented techniques. The database engine was designed to have extremely fast data retrieval. This internal product was developed in Turbo C++ using Turbo Vision libraries.
Arabic Word Processor (5/1991-8/1992)	Developer	Developed an Arabic word processor with grammar checking capabilities in a team of 4, using Borland C++ and Turbo Vision object-oriented libraries.

Honors and Awards

- 2001, Fellowship, Computer Science and Engineering Department, Michigan State University.
- 2000, Achieved Presidential 13th Annual Khwarizmi International Award, the most prestigious technical award in Iran, for developing “Multimedia Encyclopedia of Holy Quran”, Tehran, Iran.
- 1999, Achieved the award of the best Islamic software from Ministry of Culture, Tehran, Iran.
- 1999, Technical editor of Rahavard Noor Magazine, Qom, Iran.
- 1998, Achieved 2nd rank in M.Sc. graduating class in Iran University of Science and Technology, Tehran, Iran.
- 1997, Program Chair and Technical Editor of 3rd Seminar of Computer and Islamic Sciences, Qom, Iran.
- 1991, Graduated 1st in class (B.Sc.) in Azad University, Qom, Iran.

Languages

- English: Writing (very good), Speaking (good), Reading (very good), Comprehension (very good)
 - Arabic: Writing (excellent), Speaking (good), Reading (excellent), Comprehension (very good)
 - Farsi: Writing (excellent), Speaking (excellent), Reading (excellent), Comprehension (excellent)
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Publications

- **Minaei-Bidgoli, B.**, Tan, P-N., Punch, W.F., “Mining Interesting Contrast Rules for a Web-based Educational System”, *International Conference on Machine Learning Applications (ICMLA 2004)*, Louisville, KY, Dec 2004.
- **Minaei-Bidgoli, B.**, Kortemeyer G., Punch, W.F., “Association Analysis for an Online Education System”, *IEEE International Conference on Information Reuse and Integration (IRI-2004)*, Las Vegas, Nevada, Nov 2004.
- Hall, M., Parker, J., **Minaei-Bidgoli, B.**, Albertelli, G., Kortemeyer, G., and Kashy, E., “Gathering and Timely Use of Feedback from Individualized On-line Work” (*IEEE/ASEE) FIE 2004 Frontier In Education*, Savannah, Georgia, Oct. 2004.
- Topchy, A., **Minaei-Bidgoli, B.**, Jain, A.K., Punch, W.F., “Adaptive Clustering Ensembles”, *International Conference on Pattern Recognition (ICPR 2004)*, Cambridge, UK, Aug. 2004.
- **Minaei-Bidgoli, B.**, Kortemeyer, G., Punch, W.F., “Optimizing Classification Ensembles via a Genetic Algorithm for a Web-based Educational System”, *IAPR International Workshop on Syntactical and Structural Pattern Recognition (SSPR 2004) and Statistical Pattern Recognition (SPR 2004)*, Lisbon, Portugal, Aug. 2004.
- **Minaei-Bidgoli, B.**, Kortemeyer, G., Punch, W.F., “Enhancing Online Learning Performance: An Application of Data Mining Methods”, *The 7th IASTED International Conference on Computers and Advanced Technology in Education (CATE 2004)* Kauai, Hawaii, August 2004.
- **Minaei-Bidgoli, B.**, Kortemeyer, G., Punch, W.F., “Mining Feature Importance: Applying Evolutionary Algorithms within a Web-Based Educational System”, *International Conference on Cybernetics and Information Technologies, Systems and Applications: CITSA 2004*, Orlando, Florida, July 2004.
- **Minaei-Bidgoli, B.**, Topchy A., and Punch, W.F., “A Comparison of Resampling Methods for Clustering Ensemble”, *International conference on Machine Learning; Models, Technologies and Applications, (MLMTA04)*, Las Vegas, Nevada, June 2004.
- **Minaei-Bidgoli, B.**, Topchy, A., and Punch, W.F., “Ensembles of Partitions via Data Resampling”, *International Conference on Information Technology, (ITCC/IEEE 2004)*, Las Vegas, Nevada, April 2004.
- **Minaei-Bidgoli, B.**, Kashy, D.A., Kortemeyer G., Punch, W.F., “Predicting Student Performance: An Application of Data Mining Methods with an educational Web-based System”, (*IEEE/ASEE) FIE 2003 Frontier In Education*, Boulder, Colorado, Nov. 2003.
- **Minaei-Bidgoli, B.**, Punch, W.F., “Using Genetic Algorithms for Data Mining Optimization in an Educational Web-based System”, *GECCO 2003 Genetic and Evolutionary Computation Conference*, Springer-Verlag 2252-2263, Chicago, IL, July 2003 .
- Albertelli, G., **Minaei-Bidgoli, B.**, Punch, W.F., Kortemeyer, G., and Kashy, E., “Concept Feedback In Computer-Assisted Assignments”, (*IEEE/ASEE) Frontiers In Education conference*, Boston, MA, Nov. 2002
- **Minaei-Bidgoli, B.**, “New Methods for Data Compression”, *Rahavard Noor Magazine Vol 7*. Qom, Iran, Aug. 1999 (Persian)
- **Minaei-Bidgoli, B.**, “Software Engineering for Islamic Sciences”, *Rahavard Noor Magazine Vol 4*. Qom, Iran, Sep. 1998. (Persian)
- **Minaei-Bidgoli, B.**, Sharifi, M., “Requirement Analysis for an Expert Database of Rijal Science”, *3rd International Conference of the Computer Society of Iran (CSI 1997)*, Tehran, Iran, Dec. 1997 (Persian)
- **Minaei-Bidgoli, B.**, Sharifi, M., “Engineering an Islamic-Science Software with Computer Aided Software Tools”, *2nd International Conference of the Computer Society of Iran (CSI 1996)*, Tehran, Iran, Dec 1996 (Persian)

Personal

Favorites: Reading, Competitive sports, Swimming, Mountain climbing, Traveling.

Family: Three active children, and spouse who is a middle school administrator and teacher. (social sciences)

Visa Status: Student F1, is able to get Optical Practical Training permit to work in US for 1 year.

Contact Information

Behrouz Minaei

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