Chhaya Mudgal

Work Experience

Java Developer (Austin, TX; June 2000 -2001).

-Developed and designed a distributed fault tolerant server side network module for handling communication across network between other system modules using TCP/IP and UDP/Multicast UDP, making use of RMI to be able to handle communication between modules residing in different virtual machines.

-Developed Servlets for Managing the routing of phone lines using Tomcat and Apache server.

-Developed a middle tier server side module for online validating credit cards for an telecommunication application using secure digital certificates.

-Doing object-oriented analysis and design for other server side java application modules using UML and JAVA patterns.

-Other duties and responsibilities include unit testing and documentation of codes, design reviews, code reviews and mentoring of junior programmers .

- **Sessional Lecturer** (Jan 2000 - April 2000, University of Saskatchewan, Canada).

Taught JavaScript and HTML to an undergraduate class. Duties involved preparing the lecture, teaching, preparing exams and evaluating the students.

- **Research Assistant** (Sept 1998 - Dec 1999 Department of Computer Science)

Researched, designed and implemented a tool for Negotiation in Multi-agent systems. This tool uses influence diagrams to automate the process of negotiation on behalf of the user. Using this approach negotiation can be carried out in any domain. It has been recognized as one of the novel approach to do negotiation. Negotiation has been carried out in the context of peer help required in a university course. It is implemented in JDK 1.2.

- **Research Assistant** (May 1998 - September 1998, Department of Computer Science). Project involved client-server (web based) application programming in Java,
using Servlets and SQL-JDBC for database utilization.

Education

MS (Computer Science) Department of Computer Science, University of Saskatchewan, Canada, 2000. GPA 83%

MS (Honors in Physics, electronics) Department of Physics, Panjab University, Chandigarh, India, 1994.

BS (Hon in Physics) Department of Physics, Panjab University, Chandigarh, India, 1991.

Platforms Worked on	Windows (NT & 98) and UNIX.
Programming Languages	Java, C, C++, Delphi, Pascal, Prolog, Prograph, and Eiffel.
Scripting Languages	JavaScript, Perl, shell
Database	Oracle, Informix, Microsoft Access
Others	UML, Servlets, XML, OpenGL, HTML, RMI & (Understanding of CORBA), SQL, CGI, MS Visual Studio, JBuilder, CVS, Netscape Enterprise Server, Apache Server, Rational Rose

Other projects

- A group project for a graduate class (Advance course in Artificial Intelligence) in which mobile shopping agents were implemented using Voyager ORB (object request broker). These agents searched for a particular item for their user by contacting stores in a simulated mall. This project gave us an understanding of how CORBA works.

- A group project for an undergraduate class (Computer networks) for simulating and performance evaluation of the datalink layer. The main aim was to make sure that the network layer gets the exact and correct message. Also to get the functionality and the services of the data link layer simulated.

- A project for computer networks class in which simulation for the network link layer for developing an algorithm for the routers to find the best path to route the packets for two quality of services. A comparison of the developed method of routing with the existing oracle algorithm.

Award and Scholarships

- Graduate teaching Fellowship from Sept. 1998 - May 2000.
- Received Panjab University (India) Scholarship from Sept 1992- Sept 1993.
- BS (Hon) Physics -1st year --- First position in the University.
  Certificate of Distinction (Physics Association)
  Certificate of Merit (Panjab University)
- BS (Hon) Physics --- Third Position in the University.

Extra-Curricular Activities

1. Member of Graduate student association, representing the Department of Computer Science as a course council. September 1998 - August 1999.
2. Worked as a student volunteer for User Modeling Conference held in Banff, Canada. June 19-23, 1999.
3. Volunteered for Information and Technology Conference for girls held at University of Saskatchewan.

Publications

1. Mudgal C. and Vassileva J. Bilateral negotiation with incomplete and uncertain information: a decision-theoretic approach using a model of the opponent. Fourth International Workshop on Cooperative Information Agents CIA-2000. Springer Verlag, ICMAS'2000, Boston, July, 2000 b (in press).
2. Mudgal C. and Vassileva J., Multi-agent negotiation to support an economy for online help and tutoring, Proceedings of Intelligent Tutoring Systems, Fifth International Conference on Intelligent Tutoring Systems, Montreal, In press.
3. Mudgal C. and Vassileva J., Negotiation among Agents in a Multi-Agent Environment Supporting Peer-Help: a Decision-Theoretic Approach. 3rd International Conference on *Autonomous Agents* (Agents '99) Seattle, Washington, May 1-5, 1999.
4. Mudgal C. and Vassileva J., Negotiation a Conflict Resolution Technique for Multiagent Systems, Eleventh annual Graduate Symposium, Department of Computer Science, University of Saskatchewan, April 9, 1999.
5. J. Vassileva, J. Greer, G. McCalla, R. Deters, D. Zapata, C. Mudgal, S. Grant A Multi-Agent Approach to the Design of Peer-Help Environments, in Proceedings of *AIED'99*, Le Mans, France, July, 1999, 38-45.

6. Vassileva J., Deters R., Greer J.E., McCalla G.I., Kumar V.S., Mudgal C. A Multi-agent Architecture for Peer-Help in a University Course, ITS 98, San Antonio, TX, USA on August 16-19, 1998.

Poster Presentations

1. Mudgal C and Vassileva J. An influence diagram model for Multi-agent negotiation, to appear in Proceedings of the International Conference on Multi-Agent Systems ICMAS'2000. Boston, July 2000.

2. Mudgal C. and Vassileva J. Conflict Management in Multi-agent Systems, Telelearning Conference 98, Vancouver, Canada on October 14-17, 1998.

3. Mudgal C. and Vassileva J. Negotiation in the Peer Help Environment I-Help. Telelearning Conference 99, Montreal, Canada on November 6-9, 1999.