

Mr. Karan M. Gupta

San Mateo, CA

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I'm proactive and self-motivated, interested in making useful products, hands-on or by leading a team of talented people. I think software applications should look good and behave as expected intuitively. As a skilled computer engineer well experienced in a broad range of technologies and in the industry, I'm looking to take part in the development of groundbreaking technology.

Skill Set:

Programming Skills: Java, Spring, Hibernate, Struts, Webwork, FreeMarker, J2EE, Maven/Ant, Alfresco ECM, Jasper Reports, Quartz, Eclipse SWT, Ruby on Rails, XMPP/Jabber, Adobe Flex/FlashBuilder, PHP, SQL, C/C++, AJAX, jQuery, ExtJS, JavaScript, CSS, RESTful/SOAP web services, multi-threaded GUIs, multi-tiered web-applications, Visual Basic, Win32 API, Extreme Programming process (XPlanner), Distributed Computing, Robotics, Reinforcement Learning and Embedded Software development.

Embedded S/W Dev: Programming TinyOS, TI's MSP430 processors, I2C, serial communication.

System Administration: Linux/OSX/Windows system administration expertise. Well experienced with Tomcat, JBoss, IBM WebSphere, JBoss Portal, Samba, Apache HTTPD, FTP, Networking, Mail. Set up IPtables, init.d/rc.d, SELinux, and have written advanced shell scripts for administration purposes. Have set up VmWare with both Linux and Windows as host and guest OSs.

Database Experience: Well experienced with installation, programming in and administration of MySQL, PostgreSQL, MS SqlServer, Oracle, Derby and C-JDBC.

Versioning Systems: Subversion, CVS, Bugzilla, SourceJammer, Merant Dimensions.

IDEs & Applications: Eclipse, XEmacs, Vi, MS Visual Studio, Adobe Flash, Photoshop.

Others: Proven excellent research skills, allowing grasping of new technologies easily and very quickly. Excellent communication and documentation skills.

Work experience:

- **Senior Software Engineer, Sony Computer Entertainment America, Foster City,**
10/2007 – present.
 - Developing a feature-rich Java web-application to provide a collaboration environment for managers, artists and developers across SCEA's game studios in the US, EU and Japan. PostgreSQL, Hibernate, Spring, Struts 2, FreeMarker and a rich Ajax-enabled jQuery/DHTML UI form the application stack. The application integrates with vendor solutions such as Alfresco, Confluence, JIRA, Jive Forums, SourceForge, etc. to provide a rich set of features for collaboration and asset management. SwiftMQ JMS is used for messaging within the system.

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- I developed, a drag-and-drop, theme-able interface allowing users to customize their landing pages and projects with widgets. The widgets use Ajax and are little independent pieces of code to accomplish a specific task. The widgets themselves can also be configured. All customizations are persisted.
- I extended many features of the system and added several core new ones such as groups management, user profile and account management, password management, etc.
- I also completely revamped the layout, navigation and look and feel of the system, significantly speeding up not just page download, but also user satisfaction.
- **Software Engineer, TransCore, San Diego, 9/2005 – 9/2007.**
 - **Java Web-applications:** Ported an existing J2EE web-application (FMMS) from WebSphere to Eclipse/JBoss. Heavily re-engineered it, improving existing architecture for robustness, multiple DB support, and clustering and increased development efficiency. Developed Jasper Reports and added Struts and Hibernate. Designed and developed the JobScheduler, which is a Struts/JBoss web-application to execute Java programs at specified intervals, running as a JBoss service (MBean). Schedules are stored in XML files. UI uses advanced JavaScript and CSS to provide a powerful desktop-like scheduling interface. Supported other large-scale Java web-applications (VPS, VES and Host) based on JSF, OJB and DBCP as well.
 - **JBoss Clustering:** Ported J2EE web-applications from standalone to clustered solutions.
 - **Build Scripts:** Developed efficient Ant scripts to do everything from compilation to remote deployment, supporting quick customization for different customers and allowing transparent deployments on both Windows and Linux.
 - **Customer Support:** Providing support to internal customers.
 - **Server Administration:** Have setup and maintain all servers: JBoss, Tomcat, Apache Httpd.
- **Software Engineer & Administrator, Resolution Systems Inc., Lubbock, 7/2004 – 8/2005.**
 - **Java Web-applications:** Developed multi-tiered web applications using PostgreSQL (including DB architecture and coding), C-JDBC, Hibernate, Struts, FreeMarker and DHTML for deployment on JBoss and JBoss Portal.
 - **Java GUI Applications:** Developed multi-threaded standalone GUI applications using Swing and NetBeans RCP for the hospitality industry.
 - **System Administration:** Setup Linux user environments and all servers: JBoss, Tomcat, Postgresql, Apache httpd, Subversion, FTP, NFS, Samba, Jabber, Blogger.
 - **TinyOS:** Developed Wireless Mesh Sensor Networks, programming in NesC for TinyOS running on Crossbow motes. Developed TCP and Routing algorithms to ensure *reliable* wireless communication between motes using the *best* possible multihop route.
 - **MSP430 Assembly:** Developed in C; LCD, Clock and Buttons libraries for TI's MSP430F449 Board.

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- **I2C Development:** Developed an interrupt-driven standards-compliant I2C library for MSP430 processors to allow I2C communication *without* hardware support. Written entirely in C, the library implements all aspects of the protocol, including multi-master.
- **Research Assistant, AI Robotics Lab, Texas Tech University, Lubbock, 1/2004 – 6/2004.**
 - Research Localization and Mapping solutions for robots and to apply concepts of Reinforcement Learning to Robotics.
 - **Water Management System:** Developed a Java Swing application, using JFreeChart and JFreeReport to interface with physical ORP, Pressure and pH sensors for data collection (Oracle), report generation and control. Developed a PHP web interface to provide users the ability to view the data collected in the Oracle db.
- **Network Administration Assistant, Inst. of Technology & Management, 5/2001 – 5/2002.**
 - Windows NT network administration.
- **Summer Intern, Hughes Software Systems, Gurgaon, 5/2001 – 6/2001.**
 - QA Testing.
- **Summer Intern, Advanced Computer Systems, New Delhi, 5/2000 – 6/2000.**
 - Application and integration of hardware Voice Mail Systems for Telephone Exchanges and various companies.
- **Web Developer, Inst. of Technology & Management, 6/2000 – 8/2000.**
 - Initiated and developed first official College Website.

Education:

- March 2007: **Leadership & Management Development: Managing for Maximum Performance.**
UCSD Extension, San Diego, CA.
- May 2005: **Master of Science, Computer Science**, majoring in AI Robotics.
Texas Tech University, Lubbock, Texas.
Thesis: Monte Carlo Localization for Robots using Dynamically Expanding Occupancy Grids and a Centralized Storage System.
- June 2002: **Bachelor of Engineering, Computer Engineering (1st Division)**
Mahrishi Dayanand University, Institute of Technology & Management, Gurgaon, India.

Independent & School Projects:

XMPP Client: Developed a full-featured desktop XMPP client application using Eclipse SWT, Smack and Wildfire (now Openfire).

SourceJammer Plugin for Eclipse: Developed a plugin for Eclipse to perform source control actions (e.g. checkin, checkout, etc). Now, developers can avoid switching between the IDE and the SourceJammer client to manage their code. Available at: <http://sourceforge.net/projects/ksjeclipse/>

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AI Robotics: Designed robots using the Lego Mindstorms kit, and NQC language, to demonstrate navigation. Implemented wandering and HMM mapping on the Nomadic Scout Simulator. Received highest grades in all projects, for application of sound engineering principles and good programming.

Multimedia Programming: Implemented VoIP, JPEG compression and MPEG Scene Indexing in C.

Reinforcement Learning: Developed in C/C++ to carry out a performance comparison between Sarsa-Lambda and Watkins's algorithms by implementing the pole-balancing and mountain-car problems.

Advanced Operating Systems: Developed parts of a Unix clone (Boot-strapping, Memory Management, Process Creation, File System and Terminal Emulator) using Simics to emulate a Sun Sparc computer.

Distributed Computing: Developed math servers and a central distribution server along with clients to demonstrate DC concepts, in C/C++, using RPC/UDP, threads and marshalling.

Visual Basic: Developed a voice-operated application for Windows to completely control the OS by voice. Uses Windows API extensively. Created a complete Library Management System which used an ODBC connection to an Oracle DB.

Honors and Affiliations:

- U.S. Mensa Member, 2/2003 to present.
- Network of Indian Professionals, 9/2005 to present.
- Judge, South Plains Regional Science and Engineering Fair, 4/1/2005, Texas Tech University.
- Member, Major Events and Films Committee, Texas Tech University.
- Scholarship for entire Master's Program, Fall 2002 to Spring 2005, Texas Tech University.
- President, Computer Society, 8/2000-6/2002, Institute of Technology & Management, India.
- Member of Student Council, 1997-1998, Delhi Public School, New Delhi, India.
- Captain, 1995-1996, St. Joseph's College, Nainital, India.

References:

Available upon request.