# Vikram Sharma


| | *Work* | *Home* |
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## Objective

I am seeking a challenging full time position in software design and development. Offer more than three years of professional software development, and two year of academic research experience.

- Strong analytical skills, consistently resolved ongoing issues and defects, skilled at progressing from problem statement to well-documented designs.
- Demonstrated proficiency in leading and mentoring individuals while forming cohesive team environment.

## Technical Skills

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| Languages Known: | Java, C#, SQL, LISP, Perl, Tcl/Tk, OTcl, Pascal, and FORTRAN |
| Technologies worked on: | J2EE, EJB, JMS, JDBC, RMI, Java Swings, JNI, Java Servlets, Applets, JSP, Java Threads, Hibernate, JUnit, Log4j, XDoclets, XACML, UML, LDAP, Basics of .NET (ADO.NET, ASP.NET), HP-CSF, Apache Avalon, JESS (Java Rules Engine), and Struts |
| Servers worked on: | PRAMATI Server, BEA Weblogic, Borland AppServer, ATG Dynamo, Apache HTTP Server, LightTPD, Resin, Apache Tomcat 5.0, PRAMATI Web Server |
| Web Development: | HTML, DHTML, CSS, Java Script, CSS, XML, Adobe Photoshop, SmartDraw |
| RDBMS and Tools: | Oracle 8.0, MySQL, MS SQL Server, DB Artisan |
| Version Control System: | CVS, VSS |
| Security Tech. worked on: | JAAS, PKI, SSL, JCA, Ethereal, Snort, Honeywall, Honeypots, OS Fingerprinting, Honeynets, Botnet detection, Access Control Framework, Security Architectures |
| Platform/Operating Systems: | Windows, Windows NT, Working knowledge of: Linux, Basics of Debian GNU/Linux, |
| IDEs Worked on: | IntelliJ, JBuilder, NetBeans, DreamWeaver, PRAMATI Studio, Visual Studio |

## Education

University of North Carolina at Charlotte — Current

**PhD Student (Information Technology)**

***Areas of interest*:** Internet-Scale Applications, Optimistic Replication, Epidemic Algorithms, Data Provenance

University of North Carolina at Charlotte — Dec 2005

**Masters of Science (in Information Technology)**

***Thesis title:*** *Centralized Registry Framework for Windows based Information Infrastructure System Management and Configuration Diagnostics.*

Jawaharlal Nehru National College of Engineering, India — Nov 1999

**Bachelors of Engineering** in Computer Science and Engineering, Kuvempu University, India

## Relevant Professional Experience

### PRAMATI Technologies — Hyderabad, India — Mar 2003–Jul 2003

- As a ***Technical Consultant*** with PRAMATI Technologies
  - Provided critical customer support with very short turn-around time – Involved in technical support for pre-sales including consultancy for technology migration.
  - Worked with client's technical team to provide migration support for J2EE framework and PARAMTI Server.
  - Performed requirement analysis, coding project specification, and documenting case studies.
  - Designed and developed prototypes and thin wrappers for client specific requirements.

- In the ***Development Engineer's*** role with PRAMATI Server team
  - Revamped Pramati Server v3.5's command shell framework as part of major release candidate version 3.5.
  - Looked at the general ways as how the PRAMATI load balancer worked and performed scalability improvements of PRAMATI Web Server.
  - Added Attribute-Oriented programming component (XDoclets – A SourceForge project), for Pramati Application Server, deploying EJBs across multiple Application Servers.

***Projects*:**

**Pramati Server3.5** – Pramati Application Server command line framework revamp, **Bank Alert System –** Rule based J2EE implementation for transaction alerts

***Environment:***

Java, Servlets, JMS, PRAMATI Web Server, PRAMATI Application Server, Resin, XML, UML, Xdoclets, HP-CSF, Apache Avalon, JUnit, Log4j

### Q2A Solutions — Hong Kong / New Delhi, India — Mar 2001–Dec 2002

- As ***Senior Software Engineer*** and Team leader of Java Technical Team
  - Responsible for requirement analysis, encoding project specification — Worked and co-ordinated with different teams – Acted as the primary contact person for handling client communication like: requirements gathering, change request, and other queries.
  - Took part in project planning, code-reviews, teams and module assignment, setting project deadlines and overseeing co-developers.
  - Provided continuous feedback and progress report to Account Managers, and other stake holders.
  - *Project lead* for the projects: Q2AIntac – An in house system for remote collaboration, and Property Management System – Back-end property management application for Whistler Platinum, Canada.

- As ***Software Engineer*** and ***Technical Contractor*** for Hong Kong based First ECom (6 months project)
  - Member of the "Third Party Payment Gateway" team for First ECom, where we re-coded the business logic in Java and used J2EE components.
  - Responsible for application server vendor selection, the final product was packaged and deployed on Borland AppServer v4.5.
  - Worked on the implementation of VISA 3D (three domain) requirements, and incorporated changes to the Payment Gateway.
  - Integrated support for American Express transaction processing and UPS tracking system as new feature addition.

***Projects*:**

**Q2AIntac** – Collaboration Environment for real time information sharing, and **eAquirer** – Third Party Payment Gateway Implementation

***Environment:***

Java, EJB, JDBC, JSP, JNI, JNDI, Servlets, Borland AppServer v4.5, Oracle, MS SQL Server, UML

### Obgenix Software — New Delhi, India — Apr 2000–Feb 2001

- In the role of ***Member of Java Technical Team***
  - Worked as a Java and J2EE developer.
  - Involved in documentation standards, developing test cases for – module, unit, stress, and system testing.
  - Managed test-databases, data-script migration testing, and data transfer.
  - Worked on prototype integration of LDAP in EASE.
  - Evaluated Application Servers: BEA Weblogic 4.5, ATG Dynamo 4.5.

***Projects*:**

**EASE**(Entreprise Application Solution Environment) — A Rapid Application Development environment for J2EE applications. **iTrack** –Information resource management system

***Environment:***

Java, EJB, JDBC, JSP, Servlets, BEA Weblogic v4.0-4.5, ATG Dynamo 4.5, JHTML, Oracle, MS SQL Server

## Research Projects

### UNC Charlotte — Teaching Assistant, Dept. of S&IS — Aug 2006–Present

- As ***Teaching Assistant***, for Network Based Application Development, Graduate level course, responsibilities include
  - Java Servlets server support and administration of two mirrored Tomcat instances.
  - Administration and management of 32 user accounts.
  - Lab assignment design, testing, and evaluation.
  - Teaching duties also include leading and directing student term projects, evaluation, and code review.

### UNC Charlotte — Research Assistant, ISR Lab — Aug 2004–May 2006

- As the ***Research Assistant*** and founding member of ISR Lab and UNCC's Honeynet Lab, worked on:
  - ***Peer Encyclopedia***: An Internet-scale application for distributing Wikipedia's content repository. Designing efficient reconciliation protocol, self-sustaining services, and enforcing security among untrusted entities.
  - ***Privilege Messaging*** is a fine-granular authorization framework that operates on the principle that a sender requires a set of privileges in order to send messages.

- ***Summary Hash History*** (SHH) for ***Optimistic Replication***: Secured decentralized ordering and efficient replication using DFS and Topological Sort to effectively track and maintain the decentralized updates. SHH is used in data synchronization applications and development of new reconciliation protocols.
- ***Replica Based File System***: Highly available clustered server that gives fast read/write performance and distributed file reconciliation properties.
- ***Infrastructure-Scale Service*** for Data Replication: Distributed workspace application for file sharing in a multi-master collaborative environment, using SHH reconciling replicas and preserves version updates by detecting conflict and partial orderings in weakly consistent replication systems.
- Working on bots and ***botnet analysis***, design and development of bot-analysis testbed for peer-to-peer botnets.
- Design and development to ***P2P bot traffic*** and measures to control traffic flow and techniques to incapacitate P2P Bots.

***Environment:***

Java, RMI, JDBC, Servlets, LDAP, MySQL, JCA, JAAS, SSL, PKI, Ethereal, Snort, Honeywall, Honeypots, OS Fingerprinting, Honeynets, Botnet detection, Access Control Framework, Security Architectures

**TIAA-CREF** **Summer Intern, Charlotte, NC** **May 2004 - Dec 2004**

- As ***Summer Intern*** with the IT Problem Management Team
  - Developed IT Problem Management and Change Control Framework.
  - Worked Problem Management team at TIAA-CREF, developing a Problem Trend and Root cause analysis tool.
  - Initiated the work for a Web Portal, to server as online repository for problem analysis, this encompasses the problem management & its mitigation strategy.

***Environment:***

C#, ADO.NET, ASP.NET, JSP, Servlets, Oracle

**UNC Charlotte** **Research Assistant, IIS Lab** **Aug 2003–May 2004**

- As the ***Research Assistant*** for DoD sponsored project – Critical Infrastructure Integration Modeling and Simulation
  - Involved with a team of developer to prototype-design CIIMS.
  - CIIMS is a multi-agent based critical infrastructure modeling and simulation environment.
  - Evaluation of Rules and Inference engines.
  - Worked on prototype development using Java Rule Engine – JESS.

***Environment:***

Java, JESS, JENA, Cougaar Multi Agent System

## Relevant Course Work

Software System Design, System Integration, Software Testing and Quality Assurance, Project Management, Access Control, Modeling and Analysis of Communication Network, I.T. Infrastructure System Protection, Algorithms and Data Structures

## Publications

- RegColl: Centralized Registry Framework for Infrastructure System Management. Brent Kang, ***Vikram Sharma***, and Pratik Thanki. Paper presented at Usenix LISA 05 Conference, San Diego, CA, USA
- Vsync – Version based Unidirectional Synchronization for Planet-Lab Nodes, Brent Kang, ***Vikram Sharma***, Pratik Thanki and Gautam Singaraju, Demo at Usenix WORLDS 05 Workshop, San Francisco, CA, USA

## References

Available on Request