

Objective: Well rounded developer seeking full-time position to gain more experience with application development & information security. Able to write scalable, security focused, optimized code & develop quick prototypes using agile development techniques with good understanding of human usability & multiple server side technologies resulting in easily navigable, user friendly applications.

Education

School	Degree
University of Southern California Los Angeles, California (Aug `04 – Dec `06)	MS in Computer Science Specialization : Computer Science (MSCS)
Symbiosis Institute of Computer Studies & Research Pune, India (Aug `02 – July `04)	MS in Computer Applications Specialization : J2EE (MSc C.A. – J2EE)
Nowrosjee Wadia College , Pune University Pune, India (July `99 – June `02)	BS in Computer Science Specialization : Computer Science (BCS)

Work Experience & Academic Projects

Piktor – personal photo album (June 2006 – present; <http://aalokkarnik.info/piktor/piktor.php>)

- AJAX, PHP, MySQL based personal photo album
- Basic features comprise adding new albums & photos, image tagging, navigation, pagination, delayed transparent popup's, smart caching mechanism
- Admin section currently under development includes a connectivity test as of now
- Security features include integrated administrative panel, file mime type checking, IP logging
- Conceptualization, UI design, DB structure, navigation, process workflow's done by me
- Project was done to gain some practical experience with AJAX, PHP, MySQL, UI design
- Future enhancements include a web based installer & verifier, usage statistics, backup, album downloading, image & album link emailing, album views in filmstrip & slideshow formats
- Current status: Preparing for a version 1.0 release

Battleship – Knockout Edition (Jan 2006 – present)

- A java based networked online game based on the popular game Battleship
- The game play has been bent to accommodate bonus points, extra powers, new ships etc
- Architecture comprises of a lookup server, several game servers and several gaming machines
- Incorporates message passing using object oriented concepts to accommodate future changes more easily
- Uses core java, MySQL / Oracle, Java Media Framework (JMF)
- As of now the network subsystem is ready and work is progressing on game play and sound effects

Spyware Guide for the Layman (June 2005 – present; <http://aalokkarnik.info/articles/spyware>)

- Set of articles to educate a layman on spyware
- Topics include motivation to write spyware, detection & removal techniques, difficulties in tracing perpetrators, new emerging attack techniques in spyware domain, cybercrime, cybercriminals, malicious code and more
- Research involved carrying out a social engineering attack leading to a corporate network compromise

Website for the USC Law school (system design, coding & implementation; Nov 2005 – June 2006)

- Convert a static www.iandrinstute.org to a dynamic database driven <https://mylaw.usc.edu/portal/iri>
- Site is a web CMS resulting in a savings of \$4000/semester for the institute
- Provide milestone reports to show progress & design new interfaces to facilitate better data entry & information management
- Coldfusion, MSSQL Server based system provides content management, role based access control features
- Administrative role based features for adding, updating & deleting content
- Responsible for Requirement analysis, architecture & design, development & deployment
- Current status → data being loaded for final deployment

Lab Assistant / grader for CS530L – Computer Security lab at the University of Southern California (Fall 2005, Spring 2006)

- Assist the students in the lab with lab assignments involving computer security attacks like SQL injections, buffer overflows, packet sniffing etc
- Assist the computer security lab instructor in designing lab assignments and grading criteria

Interwoven Technologies, Member of Technical Staff (intern; June 2005 – Aug 2005)

- Interned with Interwoven (based in Sunnyvale – CA) on their WCMS product - TeamSite
- Involved with client team of TeamSite 6.7. Features: flex roles, utility daemon
- Wrote perl scripts for automated remote execution of Junit test scripts of service pack 2 of TeamSite 6.5. Target platform : Solaris and Windows
- Proposed a mechanism to reduce bandwidth usage and increase efficiency for TeamSite 6.7 through use of HTTP compression & encoding mechanisms

Content Management System (system design, coding & implementation; May 2005 – Nov 2005)

- Web based system for a research group at USC (TeamCore) designed to ease out their content management
- Java, MySQL, Tomcat based system features included complete administration module for maintaining site entities, search tool, file uploading
- Technologies used include jsp, servlets, beans, javascript, AJAX
- Security features include protection from SQL injections, session hijacking

Entrance Examination Registration Module (team leader, lead programmer, system designer; Aug 2003 – Oct 2003)

- Unified & led a workforce of 5 from conceptualization to implementation for Symbiosis Institute of Computer Studies & Research (SICSR) in 40 days in capacity of team leader, lead programmer, system designer
- Drafted project milestone chart & delegated tasks assessing core competency. Implemented SDLC
- Trained 3 members of the team on JSP, servlets and java beans, javascript
- Accountable to higher management through milestone presentations
- Java, MySQL, Tomcat & Apache based system features included role based system access, automated event based e-mailing, profiling, administrative functions, search capabilities, easy file based system configuration for database portability
- Technologies used JSP, servlets, java beans, javascript, java mail
- Application currently not online due to change in academic policies. Demo copy available

Packer - File Compression Tool (Sept '01 – Dec '01)

- Java applet designed to perform file compression & uploading to online file storage systems
- Translates to reduced upload time (useful on low bandwidth networks), savings on server load & disk space
- Judged best project at the intra college software exhibition held at Nowrosjee Wadia College

Technical Skills

Operating System Platforms: Microsoft Windows, Redhat Linux 9

Programming Languages: Java, C++, C, VB 6.0

Security Tools: nMap, Nessus, Retina, Ethereal, Autopsy

Databases: Oracle (9i, 8i, 7), MySQL, MS Access 2000, SQL 7.0

Concepts and RAD Tools: OOPS, AJAX, JDeveloper, Netbeans 5.1

Application & Web Servers: Apache, Tomcat 4.1.x onwards, Sun ONE, IIS

Internet Programming, Scripting & Markup Languages: HTML, JSP, Servlets & Java Beans, Coldfusion, PHP, JavaScript, CSS, DOM, ASP & ASP.Net, XML, VBScript

Frameworks: J2EE, MS dot Net, Ruby on Rails

Related Coursework

Computer Security, Web Technologies & Services (WSDL, XML and SOAP, AJAX), Computer Networks & Communications, Database Systems & Design, Operating Systems, Software Design & Engineering, Data Structures, Object Oriented Programming, Multimedia Systems & Design, Online Networked Games, User Interface Design (HCI)