

BALAJI SUBRAMANIAN

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OBJECTIVE

To obtain a position in the field of Information Technology that will enable me to hone my academic, technical and interpersonal skills

EDUCATION

Carnegie Mellon University, Pittsburgh, PA

Master of Science in Information Networking, May 2010

Anna University, Chennai, India

Bachelor of Engineering in Computer Science, May 2008

COURSES

Fundamentals of Embedded Systems, Distributed Systems, Web Application Development, Advanced Database Management, Fundamentals of Telecommunication and Computer Networks , Network Security Analysis, Applied Information Assurance, Object Oriented Analysis and Design, Information Systems Modeling,*(All at CMU)*

PROJECTS & COURSEWORK

- **DISTRIBUTED SYSTEMS(Jan 2010-):** Developed a communication infrastructure to pass messages between 2 or more processes using configuraion files and datagram sockets. Made use of Lamport's logical clocks and vector clocks to ensure ordering among events.Other features of this system included multicasting of messages and mutual exclusion. Also working on a P2P real-time file streaming distributed system.
- **WEB APPLICATION DEVELOPMENT(Jan 2010-):** Developed a website to enable users to register and add bookmarks of their favorite websites using Model-View-Controller design pattern. Concepts- Servlets, DAOs, JSP, JSTL. Also Currently working on a medical center website that enables users to fix appointments with center and doctors.
- **FUNDAMENTALS OF EMBEDDED SYSTEMS(August 2009- Dec 2009):** Designed and implemented an RTOS for mutex-based highest-locker priority to bound priority inversion and scheduled tasks according to rate-monotonicity. Other aspects include interrupt and exception handling, Software Interrupts, implementing mini-Linux library with syscalls for user applications, code optimization using GUMSTIX hardware (ARM)
- **"A novel steganographic approach using Microsoft Word Document" (Jan 2008- Apr 2008):** Developed a steganographic method using MS Word Document as a cover document to embed textual information and send it across to the receiver who could use a secret key to access the document. Process is carried out in two steps- degeneration and revision. Completed as part of UG degree requirements.
- **OBJECT ORIENTED ANALYSIS AND DESIGN (Jan 2009- Mar 2009):** Developed use cases, Software Requirement Specification, conceptual models, class diagrams, state diagrams, sequence diagram, deployment diagram and performed metric analysis.
- **ADVANCED DATABASE MANAGEMENT- "EggShell HomeBuilder (Oct 2008- Dec 2008):** Developed Entity Relationship Diagrams, databases, forms and reports using Oracle tools for an integrated home builder system.
- **FUNDAMENTALS OF TELECOMMUNICATION AND COMPUTER NETWORKS: "Analysis of Abilene Data using flow-tools" (Aug 2008- Dec 2008):**Performed an analysis of Abilene Network data using OSU flow tools. Analysis yielded results related to network security, utilization, intrusion, protocol usage, network usage by applications etc.
- **APPLIED INFORMATION ASSURANCE- "Hardening Windows Server 2008" (Feb 2009- May 2009):** Involves reviewing the security features of Windows Server 2008 and deploying steps to harden the server. Some of the measures include using BitLocker, SharePoint server, granular auditing, Anti-virus software , NetShare utility. Also involved in Intrusion Detection and Information Assurance exercises simulating real-world scenarios.
- **NETWORK SECURITY ANALYSIS (Jan 2009- May 2009):** Analyzed various networking protocols, layers of Internet, security aspects using Wireshark. Worked on a project to analyze proxies on the Internet, their lifetimes and patterns.

SKILLS

- **Programming Languages** C, C++, Java, HTML, XML, JSP, JSTL, Assembly(ARM), JavaScript, JavaFX, PL/SQL, JMF, Ajax
- **Operating Systems** Windows, UNIX, Linux Ubuntu
- **Database** SQL 2000, Oracle, MS Access
- **Tools** Eclipse, Apache Tomcat, Wireshark, Adobe Photoshop, MS Office Suite

HONORS & ACTIVITIES

- Awarded 33% scholarship by Carnegie Mellon University to pursue my graduate program
- Placed in the top 2% of participating candidates in the country in National IT Aptitude Test conducted by NIIT Ltd.,India
- Completed a Sun Educational Services course in Web Component Development
- Completed training at WizPatent Technologies, Singapore (June 2006)
- Participated in many national and state level technical symposia during my undergrad