



Indian Institute of Technology, Bombay

Powai, Mumbai 400 076

Employment Application Form

For Campus Selection:

Institute Details

Roll No.	05329021	Batch	2007
Department	School Of Information Technology	Program	M.Tech.

Personal Details

Name	B. Karthik	Sex	Male
Date of Birth	4th May, 1984	Nationality	Indian
Specialization	Information Technology	City	

Examination	University	Institute	Year	CPI / %
Post Graduation	IIT Bombay	IIT Bombay	2006	8.17
			Overall CPI including project	8.17
<i>Undergraduate Specialization : Computer Engineering</i>				
			2005	63.27
Graduation	Mumbai University	K.J. Somaiya College of Engineering	2004	59.68
			2003	56.79
			2002	62.92
Intermediate/+2	Maharashtra State Board	Vivekanand College, Kolhapur	2001	88.00
Matriculation	Council of Indian School Certificate Examinations(ICSE)	Seventh Day Adventist High School	1999	77.33

Technical Skills/Abilities

- **Languages:** C, Java, HTML, ASP, PHP, JavaScript, perl, XML, C#
- **Operating Systems:** Windows XP/2000, Linux/Unix
- **Database Systems:** MySQL, MS SQL 2000, Oracle 9i
- **Versioning Systems:** CVS, SVN

Projects

MTech Project: Declarative means of defining Events and actions in RFID, Advisor *Prof. Bernard Menezes*

RFID systems are at the verge of data explosion. Also, RFID applications like the supply chain and inventory management systems require event triggered actions to be taken. Not much research have followed up for generalisation of event triggered actions in RFID Systems. We are proposing a way to generalize the process of event triggered actions by specifying a language to define rules. We will also try and incorporate/integrate the concept into already existent Sun Java RFID system.

Seminar: RFID Security, Advisor *Prof. Bernard Menezes*

One of the main concerns for RFID security is tracking. Using cryptographic primitives to thwart traceability issues is not a feasible approach. We surveyed some of the existing protocols (OSK, Molnar-Soppera-Wagner, etc) in this seminar and also looked into various issues in those protocols.

B.E. Project: Application Firewall Framework, Advisor *Mr. Deepak Sharma*

The Application Level Gateway is one way of filtering data but is more sophisticated. Most scenarios do not require such detailed level of filtering. Filtering of data has to be done efficiently. We designed and implemented an identity based filter for efficient filtering at application layer.

Course Projects

Systems Lab: Eclipse plug-in titled "ArchEd"

"ArchEd" is an eclipse plugin to provide visual editing capabilities based on Software Architecture developed by a team of 48 students. The project provided immense exposure to the Eclipse Framework, the Eclipse Modeling Framework (EMF), the Graphical Editing Framework (GEF), XML Schemas, XML files, parsers and a lot of Design patterns. Exposure to the Large project management and Software Development Life Cycle were add-ons.

Network Security: Offline micro-payments without trusted hardware.

We surveyed many of the proposed protocols for electronic payments and in particular micro-payments. We compared those with one of the de-facto means of payment in existence, the Credit Card. One of our goals in this project was to facilitate electronic payments of small denominations using portable hand-held devices. We analyzed the PayWord protocol and proposed a modification to it.

Object Oriented Systems: Design and Implementation of Feed Aggregators.

We designed and implemented a RSS and Atom feed reader using Java. The project emphasized on the study and the use of Design Patterns in the Object oriented Development.

Mobile Computing: Performance comparison of two Ad-hoc networking protocols (TORA and AODV) using Opnet network simulator

Experience

Intern, Webaroo Inc., Mumbai (*December 2005*), Worked on Personalization and GUI for handheld devices

Internship included design and development of a module on Personalization and modifications to the existing GUI for handheld devices.

Teaching Assistant:

- **Network Security**, IIT, Mumbai (*July 2006 – till date*)
- **QoS in Networks (DEP mode)**, IIT, Mumbai (*Jan 2006 – April 2006*)
- **Computer Networks (DEP mode)**, IIT, Mumbai (*July 2005 – Nov 2005*)

Extra curricular activities

- Organized many events by being in the council of IT Association, KReSIT during graduation
 - Have contributed a lot of technical articles to the undergraduate college magazine, "Kshitij" some of which include "A Simple Surround Sound decoder", "An Introduction to RFID Technology", etc.
 - Took active part in organizing seminars during the annual technical undergraduate college festival "Abhyantriki 2003" (Most of which were given by active and retired IAF personnel)
 - Won Second Prize in the Robotics (Level I) competition at "Technovanza 2003" held at the Veermata Jijabai Technological Institute, Mumbai
 - Won Third Prize in Corporate Edge event held at "Abhyantriki 2006" held at K.J. Somaiya College of engineering.
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