

Karthik Narayan

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EDUCATION: **Stevens Institute of Technology**, Hoboken, New Jersey.
Master of Engineering in Computer Engineering, GPA 3.9 May 2005
Visvesvaraya Technological University (VTU), Belgaum, India.
Bachelor of Engineering in Computer Science and Engineering, GPA 4.0 May 2003
GRE Score 1510/1600 Verbal Reasoning 720 Quantitative Reasoning 790

SKILLS:
Languages: C, C++, Java, Perl, SQL, Assembly programming, VB, VC++
Software: MATLAB, MP Lab, Dreamweaver, Ns-2, IT++, Crypto++,
TIBCO EMS, MS Visual Studio
Data Base: Oracle, MS Access, Sybase
Environments: Windows 98/2000/NT/XP, MS DOS, UNIX, Linux

WORK EXPERIENCE: **Merrill Lynch**, Senior Specialist, New York
Debt Technology, 05/06 to Present

- Develop structuring tool for collateralized mortgages based on automobile loans
- Aid traders in structuring and analyzing the risk for several CMO's traded by Merrill

Citigroup Inc, IT Analyst, Warren, New Jersey
Equities Architecture, Sales and Accounts 06/05 to 05/06

- Develop asynchronous java email and paging systems to monitor status of critical systems
- Rolling out TIBCO EMS and setting up role based security on TIBCO brokers for Equities
- Explore use of KDB tick database for use in real time ticker plant
- Part of team developing next generation order execution and crossing engine using Java and tools such as Wily Interscope for performance analysis
- Implement new security rules on institutional trading accounts using Sql and Perl scripts
- Create and alter Sql stored procedures for the Sales/Accounts Sybase database

Stevens Institute of Technology, Research Assistant, Hoboken, New Jersey
Lightweight error resilient cryptographic systems: 2/04 to 6/05

- Implemented visual cryptographic schemes for secret sharing
- Designed novel encryption systems that provide error resilience along with security.
- Developed a new key distribution algorithms for group-oriented communication
- Implement advanced cryptographic algorithms in Java and C++

Larsen & Toubro Ltd, Project Intern, Mysore, India
Design and Implementation of 4-stage power factor controller: 3/03 to 6/03

- Designed the algorithm for calculating the power factor of input electricity
- Designed, Coded and tested the software and hardware for the device using MP Lab
- The results obtained form this project were used to develop a commercial device by L&T

Indian Institute of Science, Project Intern, Bangalore, India
Comparative Study of Edge Detectors and Their Implementation: 11/02 to 6/03

- Implemented and compared the performance of several different edge detectors
- Adapted edge-detectors to be used in motion detection and estimation in video coding

PUBLICATIONS: **On the Design of Secure Error Resilient Diffusion Layers for Block Ciphers** *Masters Thesis*
High Diffusion Codes: A Class of Maximum Distance Separable Codes for Error Resilient Block Ciphers *IEEE Global Telecommunications Conference, GLOBECOM 2005*
High Diffusion Cipher: Encryption and Error Correction in a Single Cryptographic Primitive *4th International Conference on Applied Cryptography and Network Security, ACNS 2006*