

Gautam Roy

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Education

Texas A & M University, College Station, TX
MS in Computer Engineering specializing in Distributed Algorithms
Advisor: Prof Jennifer Welch
GPA: 3.8/4.0

Expected Graduation: Aug 09

Indian Institute of Technology, Guwahati
Bachelors of Technology, Electronics and Comm. Engineering
GPA 8.38/10

Course Duration: 2001 - 05

Skills

Operating Systems Symbian, Linux, UNIX, Windows

Languages C, C++, Symbian C++, ARM Assembly

Software Tools Matlab, Codewarrior IDE, Lauterbach Trace 32, NS-2, Rational Rose, Rational Clearcase

Other Skill Distributed and Parallel Algorithms, OpenMP, MPI, DVB –H network stack and components, IP-Datacasting, RTP/RTCP, SDP, Multimedia Codecs and file formats, Symbian MMF

Work Experience

Employer: Department of Computer Science and Engineering, Texas A&M University

Position: Research Assistant

January 08- Present

Project: (*Team 6 Members*)

A Distributed Pool Architecture for Genetic Algorithms, accepted for Publication in the IEEE Congress on Evolutionary Computation (CEC) 2009

Devised a novel way to do Distributed GAs in which the participating processors can be of different speeds and the termination of the algorithm is not affected by failure of few of the participating processors.

Employer: Samsung India Software Operations Pvt. Ltd. Bangalore-India

Position: Embedded Software Engineer, System LSI Division

July 05 - July 07

Projects

1. *Digital Video Broadcast for Handheld (DVB-H) Player (Team: 5 member)*

March 06 – July-07

Was part of the “TV on Mobile” Player (DVB-H) project on Samsung Mobile Application Processors interfaced with Samsung DVB-H Channel Decoder IC- S3C4F10

Technology: Analysis and configuration of DVB-H networking stack for Symbian. Processing H264 (video) and AAC+ (audio) data received over RTP using multithreading and rendering them in synchronization.

Achievement: Sole member of team sent to Headquarters Korea, for final integration and demo of the project to customer

2. *Symbian OS based Media Player solution (Team: 2 member)*

September 05 - March 06

Responsibility: Developing Media Player for ARM core based Samsung Mobile Application Processor which entailed developing Symbian Multimedia Framework Plugins for various audio and video codecs, and audio-video synchronization.

Employer: IBM India Research Lab New Delhi – India

Position: Summer Intern

May – July 04

Project:

Devised a Metric for Accent Comparison between speakers based on syllable stress

This was part of an ongoing project to build an accent trainer for customer support centers

Projects

1. Memory Mapped File Library for C++ (Team: 4 member) April 08
 - a) Developed Classes that provide Read Only, Write Only and Read/Write Access to file as a Memory Map using underlying memory mapping functionality of OS
 - b) Provided STL compliant streams for input/output from these files using custom streambuf objects
2. Comparative Analysis of GTKMM, Qt and wxWidget C++ GUI libraries (Team:2 member) Feb 08
 - a) The libraries were compared on criteria such as Ease of Use (Installation, UI Designer, Writing Helloworld programs, Performance (Speed, Memory footprint, Compilation time), Overall functionality (Intuitiveness, Quality of Widgets, Richness of the library, and cleanliness of user code).
3. Evaluation of PI controller based Probabilistic Early Response TCP (Team: 2 member) Nov 07
4. Wavelet Based Watersnake Algorithm for Image Segmentation – Undergraduate Thesis Aug 04- Apr 05

Graduate Coursework

Communication Networks	Analysis of Algorithms
Real-Time Systems	Distributed Algorithms and Systems
Advanced Programming Techniques	Parallel Algorithms Design and Analysis
Algorithmic Foundations of Networks	Discrete Algorithms for Mobile and Wireless Networks

Achievements and Awards

1. Was promoted to Senior Software Engineer in March 2007 with an Appraisal Grade of 1 (Highest in Samsung system)
2. Secured first rank in Bitwise-2007 in Samsung (global programming and algorithm competition organized by IIT Kharagpur) (Global Rank – 108)

Interests and Activities

Swimming, Basketball, Dramatics, Rock Music, Algorithm competitions
Active member in cultural and volunteer activities of Indian Association at TAMU

Work Authorization

Eligible for Practical Training in USA