Curriculum Vitae

Harsh Upadhyay

Master of Science in Computer Science and Engineering (CSE)

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Objective: Quest for deep understanding of Computer science, enhance diversified knowledge and forge a challenging and prospective career.

Education:

Qualification	School/College	Year of passing	Score
High School (ICSE)	Boy's High School Allahabad(UP)	2005	93.6%
Intermediate+2 (CBSE)	Akalank Public School-Kota (Rajasthan)	2007	75%
Bachelors	National Institute Of Technology Calicut	2012	GPA 8.36/10

Skill Set:

- Multi Agent Systems, SOA, pub-sub systems, enterprise architecture, agile methodologies, game theory, algorithm design and analysis, computer networks and operating systems.
- Programming Languages: C, C++, C# Java and familiar with OCaml.
- Familiar with (basic level) HTML, CSS, XML, XHTML, JavaScript, PHP &MySQL, DB2, ASP (VB Script) and Perl.
- Technologies: Java Agent Development Framework(JADE), JMS, OBJ, EMS, Maven
- Operating Systems: Worked with GNU/Linux and Windows 7/Vista/XP.
- Working knowledge of equity and credit derivatives, structured products and investment banking.

Professional Experience:

Goldman Sachs (June 2012 – current): My current role of Analyst Developer in the securities division requires me to provide and maintain cloud based software solutions to support the business of structured products. I contribute to the development of three major systems:

- A java based, real time distributed system that manages the asset servicing workflow for structured derivatives. It connects to multiple other systems within the firm to calculate and advise users of the firm's obligation towards clients.

- A cloud based reconciliation platform with a C# front end that uses the SOA paradigm. It receives data from external parties and automatically matches them with firm's calculations in real time.
- An approval workflow manager with a rich set of reporting features.

Internship at Texas Instruments Bangalore (May-July 2011): As part of summer internship program I worked as project trainee at Texas Instruments India under Professor Mandayam Srivas from Chennai Mathematical Institute. My role involved formal verification of a C language model for Reference Window DMA Unit used in Video Encoder Application. This required sound understanding of the motion estimation technique used by the application on my part. Apart from enriching my knowledge about the area of formal verification and video compression, the experience also helped me in developing a professional attitude and an understanding of how things work in the industry.

A few months later, a paper based on my work was published in the Texas Instruments India Technical Conference 2011, where I was listed as one of the co-authors. The conference is internal to Texas Instruments, but fairly competitive in nature.

Academic Projects:

- **Emergency Medical service using Multi Agent Systems (2011-12):** For my senior year project, my team of four attempted to demonstrate the advantages offered by a multi agent approach in designing robust, real time distributed intelligent systems that are fault tolerant. As a proof of concept, we designed a system that would receive distress calls and suitably coordinate paramedical services to maximize survival probability. Situational factors drove the decision making algorithms, namely patient location, staff availability in each hospital etc. We used Java Agent Development framework (JADE) and implemented a working prototype.
- **Elementary Game Theory(2010-11):**This manuscript covers an in-depth, game theoretic analysis of two case studies, namely the popular game show "Deal or No Deal" and the 3G Spectrum Auction conducted by the Government of India in 2010. The basics of game theory are also covered in order to broaden its scope and to include readers that are not familiar with the concepts of game theory.
- **Airline Reservation System (2009-10):** Implemented an online airline reservation system using PHP and MySQL. Its key features include unique PNR for each ticket and real-time reservation.

Scholastic Achievements &Extra-Curricular activities:

- Actively contributed to the community service and diversity initiatives of my workplace
- Participated in the various sporting events to raise health awareness amongst the people.
- Was amongst the top 10% in the computer science class of 2012, NIT Calicut
- Volunteered as the placement representative of my class.
- Worked as Senior Marketing Executive for the Computer Society of India- NITC Students Chapter for the academic year 2010-2011.
- Secured a state rank of 47 in State Level Talent Search Examination (STSE-2005, Uttar Pradesh) and reached level 2 in the National Talent Search Examination-2005.
- Jointly lead the college dramatics team in the academic year 2010-2011.