

Curriculum Vitae of **Amit Kumar Dutta**

CONTACT INFORMATION	1501 15 th Avenue South, Apartment 15 Birmingham, Alabama, 35205 USA	Cell: +1(205) 413-5598 E-mail: adutta@cis.uab.edu WWW: http://www.amitdutta.net
OBJECTIVE	To develop something new that is both theoretically sound and practically significant and in a way lend a hand to the advancement of the humankind, leverage my skill and enthusiasm with the best utilization of my experience and education to establish myself as a ‘world class’ software engineer in the global community.	
EDUCATION	The University of Alabama at Birmingham , Birmingham, Alabama, USA M.S., Computer and Information Sciences, August 2014 (Expected) <ul style="list-style-type: none">CGPA: 4.0/4.0, Research work on Digital Data Waste & Cloud Security at SECRETLab Bangladesh University of Engineering and Technology , Dhaka, Bangladesh B.SC., Computer Science and Engineering, October 2009 <ul style="list-style-type: none">CGPA: 3.74/4.0 (Major CGPA: 3.88/4.0, 9th in a class of 120 students)	
RESEARCH WORKS	“SecLaaS: Secure Logging-as-a-Service for Cloud Forensics”, Shams Zawoad, Amit Kumar Dutta and Ragib Hasan, To appear at the the ASIACCS 2013 . (Acceptance rate: 16.2%) “Prefix transpositions on binary and ternary strings”, Amit Kumar Dutta, Masud Hasan and M. Sohel Rahman, Accepted at Information Processing Letters, Elsevier, 2012	
ONLINE PROFILE	CodeProject Articles¹ , Linkedin Profile¹ , github¹	
PROFESSIONAL EXPERIENCE	8/2012 - Present, Graduate Assistant, The University of Alabama at Birmingham , Birmingham, Alabama, USA <ul style="list-style-type: none">Responsibilities:<ul style="list-style-type: none">For Fall 2012, I am a Teaching Assistant for “Introduction to Object Oriented Programming” and “Discrete Structures” courses. 5/2010 - 7/2012, Software Engineer, Vizrt (http://www.vizrt.com), Dhaka, Bangladesh <i>Vizrt creates leading-edge content production tools for the digital media industry. I am working in Viz Media Logger project.</i> <ul style="list-style-type: none">Key Activities:<ul style="list-style-type: none">Performed product design and architecture related research of Viz Media Desk (the core framework of all Vizrt MAM applications), coding Viz Media Logger on top of this framework.Developed reusable components (e.g. media player, media time code control, GUI rendering from XML specification etc.) and a media plug-in in Vizrt’s proprietary media framework to render D3DImage in WPF surface so that the Video Player can support overlays.Coded custom controls in WPF, generate stub classes from WADL (Web Application Description Language) specification and coded corresponding serialization, authorization functionality, writing unit/integration test cases.Technologies: WPF, Prism, MVVM, REST, C#, C++, BazaarAchievements:	

¹Codeproject articles: <http://www.codeproject.com/script/Articles/MemberArticles.aspx?amid=5747687>, Linkedin profile: <http://www.linkedin.com/in/amitdutta/>, github: <https://github.com/amitdutta>

- Gained knowledge in User Experience, can understand, design and implement User Interfaces that exactly meet customer requirements.
- Achieved expertise in XAML, Data Binding, Templates and Expression Blend, Prism framework, Dependency Injection (Unity).
- Being familiar with Scrum development process and Application lifecycle management tools.
- Contact: Mahmudul Haque Azad - ScrumMaster (MHaqueAzad@vizrt.com)

9/2009 - 8/2010, Offshore Consultant (Software Engineer), **Quantitative Intelligence (QI), Inc.** (<http://www.qianalysis.com>), Princeton NJ

QI analyzes and displays relationship patterns by capturing and classifying electronic communication.

- Key Responsibilities:
 - Integrated outlook meeting synchronization in QI, improved QI outlook add-on and relationship graph to implement this functionality.
 - Improved and added features in QI core service, which archives, stages and clusters email and social networking data in relational database.
 - Fixed various issues, improved group and event analysis in QI's relationship map.
- Technologies: C#, Windows Forms, SQL Server CE, WIX, SVN
- Achievements:
 - Gained knowledge about Social Networking (SNA) visualization algorithms.
 - Mastery of several e-mail retrieval protocols like IMAP, POP3 and MAPI, the messaging architecture of Microsoft Windows.
 - Gained advanced knowledge on Windows Forms development and design patterns.
- Contact: Ruhul Quddus - CEO (rquddus@qianalysis.com)

12/2009 - 4/2010, Senior Programmer (Technology/Development), **Axiata Bangladesh Limited (Robi)** (<http://robi.com.bd>), Dhaka, Bangladesh

Robi is a pioneer GSM mobile telecommunications service provider in Bangladesh.

- Key Activities:
 - Implemented CXO's chat room where higher management can chat with general employees. Typical features were web based chat client, anonymous log in, login privilege based UI, private message, smilies, flood control, realtime log viewing etc. Technologies: Ajax, PHP, HTML, CSS
 - Wrote custom Order Queue Management System to ensure better quality of service. The system can generate tokens and display context dependent advertisement. Technologies: C# 3.5, SQLite, Oracle 9i, NHibernate
- Contact: Mohammad Maksud Hossain - General Manager (Maksud@robi.com.bd)

12/2008 - 12/2009, Software Engineer, **Binary Quest Limited** (<http://www.binaryquest.com>), Dhaka, Bangladesh

During the senior year of my undergraduate studies, I joined Binary Quest, an Independent Software vendor company.

- Key Activities:
 - Developed order entry module in an ERP system, coded database layer for Employee Attendance Management System, implemented complex business logic in stored procedures to generate employee attendance report.
 - Coded MAC and group based authentication system, video capturing and reporting software and auto key stroke simulation (this application accesses database through a web service and simulate keyboard to fill the data in a form).
- Technologies: C#, WPF, Prism, Win32 API, SOAP, Microsoft SQL Server
- Contact: Sazzad Hossain - Managing Director (sazzad@binaryquest.com)

COMPUTER SKILLS	<p>Programming Languages: Java, C#, C++, C, UNIX Shell Programming, 80x86 Assembly Language, Prolog, Verilog HDL</p> <p>Web Development: PHP, JavaScript, HTML, CSS, jQuery</p> <p>Database: Oracle, MySQL, MS SQL Server, SQLite, XML</p> <p>Frameworks & Platforms: WPF, WCF, Windows Forms, J2SE, J2EE, OpenGL</p> <p>Operating Systems: Unix, Windows</p> <p>Scientific computing & Typesetting Tools: MATLAB, Quartus, Pspice, L^AT_EX</p> <p>Miscellaneous: Test Automation Framework (White), Amazon EC2, Amazon S3, OpenStack</p>
GRADUATE PROJECTS	<p>Lexi Editor Implementation: Implementation of Lext editor (as proposed in the Design Pattern book of “The Gang of Four”). Source: https://github.com/AmitDutta/Lexi</p> <p>Cloud Forensics Research: Implementation of “Secure Logging-as-a-Service” scheme using OpenStack & development of One-Way Accumulator.³</p> <p>3D Viewing and Modeling: Implementation of 3D world and object (A Ferris Wheel) development. (Video demo: http://bit.ly/SLi9xh, Source: https://github.com/AmitDutta/3d-Ferris-Wheel)</p>
SOFTWARE PROJECTS	<p>Media Agency Management System for Maxus²: Developed an outdoor media management package that is used to create new outdoor advertisement(i.e. Bill Board), offer them to client, manage suppliers, generate plans, work orders and pay orders, create bill and posting bill to an existing accounts software. This package generates necessary reports in proper format and implements all the complicated business logics the firm uses. Platform: C#, Crystal Reports, Oracle 9i (Server & Client)</p> <p>3D visualization of a Fair (Video demo: http://bit.ly/11AZDg5)²: An implementation of the celebration of Pohela Boishakh in Boishaki Mela (A traditional fair which is celebrated on the first day of Bengali calender). Platform: Open GL with C++</p> <p>Network & Data Link Layer Implementation²: Implemented CRC checking and bit stuffing at data link layer, Link State Routing protocol at network layer and complex thread synchronization between both layers. Platform: J2SE, Java Communications API</p> <p>Website for Metal(PVT) Ltd: This website is used to display products and outlets, manage stock and sales, and create bar charts to display sells graph. Platform: PHP, MYSQL, JavaScript</p> <p>Virtual Memory, Multiprogramming and Console implementation of an Operating System²: As a Sessional (lab) project, added virtual memory, multiprogramming and console functionalities in Nachos. Platform: C++, NACHOS, Unix</p> <p>Simplified Pascal Compiler²: Implemented simplified PASCAL compiler as a part of Compiler Sessional (lab) project. Platform: Lex/Yacc, C++</p> <p>Screen Saver for DOS²: A TSR program which acts like a screen saver for DOS. Platform: 80x86 assembly language</p>
HARDWARE PROJECTS	<p>Wireless Electrocardiogram system²: This system grabs heart signal from human body, filters, amplifies the signal and sends wirelessly to remote machine to display heart beat graph. Platform: Analog circuit, Java, C++ to write microcontroller code, Wireless transmitter and receiver modules</p> <p>4-bit Microprocessor²: This microprocessor can execute a set of 28 instructions from the Intel 80x86 processor family. Its main features include single stage pipelining, micro programmed control unit and separate data and instruction RAM.</p>

²for more details of my academic projects (source code, presentations and schematic diagrams) please visit <http://www.amitdutta.net/education.php>