# Amit Kumar Dutta


CONTACT INFORMATION

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OBJECTIVE

To obtain an internship opportunity in Software Development in Summer 2013.

EDUCATION

**The University of Alabama at Birmingham**, Birmingham, Alabama, USA

M.S., Computer and Information Sciences, August 2012 - August 2014 (Expected)

- Pursuing research work on Digital Data Waste and Cloud Security at SECRETLab
- Paper on Cloud Forensics: "SecLaaS: Secure Logging-as-a-Service for Cloud Forensics" (Submitted at ASIACCS 2013.

**Bangladesh University of Engineering and Technology**, Dhaka, Bangladesh

B.SC., Computer Science and Engineering, October 2009

- CGPA: **3.74**/4.0 (**9**th in a class of 120 students)
- Thesis: ***Prefix transpositions on binary and ternary strings***, accepted at BIOCOMP'2010, Poster accepted at APBC'2010.

ONLINE PROFILE

**CodeProject Articles**[1], **Linkedin Profile**[1], **github**[1]

PROFESSIONAL EXPERIENCE

8/2012 - Present, Graduate Assistant, **The University of Alabama at Birmingham**

- 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

- Performed product design and architecture related research of Viz Media Desk (the core framework of all Vizrt MAM applications), coding Viz Media Logger (`http://www.vizrt.com/products/viz_media_logger/article3886.ece`) 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, a tool to generate stub classes from WADL (Web Application Description Language) specification and corresponding serialization, authorization functionality, writing unit/integration test cases.
- Achievements:
  - Gained profound knowledge in User Experience, XAML, Data binding, Templates, Expression Blend, Prism, Scrum, ALM tools, Clean Code, Design Patterns and refactoring to patterns, Software Team management.
- Technologies: C#, Windows Forms, SQL Server CE, WIX, SVN

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

- 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.
- Achievements:
  - Learned Social Networking (SNA) visualization algorithms, e-mail retrieval protocols like IMAP, POP3 and MAPI, the messaging architecture of Microsoft Windows and advanced windows forms development.

[1] Codeproject articles: `http://www.codeproject.com/script/Articles/MemberArticles.aspx?amid=5747687`, Linkedin profile: `http://www.linkedin.com/in/am1tdutta/`, github: `https://github.com/amitdutta`

- Technologies: C#, Windows Forms, SQL Server CE, WIX, SVN

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

- 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.
- Wrote custom Order Queue Management System to ensure better quality of service. The system can generate tokens and display context dependent advertisement.

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

- 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).

## Computer Skills

**Programming Languages**: Java, C#, C++, C, UNIX Shell Programming
**Web Development**: PHP, JavaScript, HTML, CSS, jQuery
**Database**: Oracle, MySQL, MS SQL Server, SQLite, XML
**Frameworks & Platforms**: WPF, WCF, Windows Forms, J2SE, J2EE, OpenGL
**Operating Systems**: Unix, Windows
**Scientific computing & Typesetting Tools**: MATLAB, Quartus, Pspice, LaTeX

## Selected Academic Projects

**Lexi Editor Implementation**: Implementation of Lext editor (as proposed in the Design Pattern book of "The Gang of Four"). Source code: https://github.com/AmitDutta/Lexi

**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)

**Media Agency Management System for Maxus**[2]: 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)

**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++

**Wireless Electrocardiogram system**[2]: This system grabs heart signal from human body, filters and amplifies the signal, pass that to ADC and then sends digitized data to remote receiver using wireless transmitter. Wireless receiver receives the signal, pass that to computer via microcontroller. A java application constantly reads data from serial port and plots them in a graph. Platform: Analog circuit, Java, C++ to write microcontroller code, Wireless transmitter and receiver modules

**Network & Data Link Layer Implementation**[2]: 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

## Awards

- Dean's and academic merit scholarships at Undergraduate level (2006-2009)
- Graduate assistantship and full tuition scholarship at UAB.

## Reference

Available upon request.

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