MD IMRUL KAYES

CONTACT INFORMATION	ENB 328, Systems Lab Computer Science and Engineering University of South Florida Tampa, Florida, USA 33620	*Voice:* (813) 405-6320 *E-mail:* imrul@mail.usf.edu http://www.cse.usf.edu/∼imrul

RESEARCH INTERESTS

Networked and Distributed Systems, Privacy, security and user Influence in social ecosystems, Social Data Mining.

EDUCATION

University of South Florida, Tampa, Florida USA

Ph.D. Candidate, Computer Science and Engineering, From August 2011
CGPA: 3.83
- Advisor: Dr. Adriana Iamnitchi

Bangladesh University of Engineering and Technology, Dhaka, Bangladesh

B.Sc(Engg.), Computer Science and Engineering, October 2009
CGPA: 3.61

PUBLICATIONS

[1] **Imrul Kayes, Adriana Iamnitchi**, Aegis: A Semantic Implementation of Privacy as Contextual Integrity in Social Ecosystems, *Eleventh IEEE Conference on Privacy, Security and Trust (PST), Catalonia, Spain, July 2013.*(Acceptance rate: 42/146 = 28.76%)

[2] **Imrul Kayes, Adriana Iamnitchi**, Out of the Wild: On Generating Default Policies in Social Ecosystems, *IEEE ICC'13 - Workshop on Beyond Social Networks: Collective Awareness, Budapest, Hungary, June 2013.*(Acceptance rate: 35.7%)

[3] **Imrul Kayes, Xiaoning Qian, John Skvoretz, Adriana Iamnitchi**, How Influential are You: Detecting Influential Bloggers in a Blogging Community, *4th International Conference on Social Informatics, Lausanne, Switzerland, December 2012.* (Acceptance rate: 25.9%)

[4] **Imrul Kayes**, Test Case Prioritization for Regression Testing Based on Fault Dependency, *Proc. of IEEE 3rd International Conference on Electronics Computer Technology (ICECT), 2011, Volume 5, Page 48-52.*

[5] **Imrul Kayes**, Agile Testing: Introducing PRAT as a Metric of Testing Quality in Scrum, *ACM SIGSOFT Software Engineering Notes, Volume 36, Pages 1-5, March 2011.*

[6] **Imrul Kayes, Mahmud Hossain, Mostofa Akbar**, Benchmark Analysis of PC server, *Undergraduate thesis, Bangladesh University of Engineering and Technology, 2009.*

MAJOR RESEARCH PROJECTS

Aegis: A Semantic Implementation of Privacy as Contextual Integrity in Social Ecosystems [1, 2]

Distributed Systems Lab, USF, Tampa, FL **Summer 2012 - present**

Combining and incorporating rich semantics of user social data, which is currently fragmented and managed by proprietary applications, has the potential to more accurately represent a user's social ecosystems. However, social ecosystems raise serious concerns regarding privacy. This project proposes to model privacy as contextual integrity using semantic web tools and focuses on defining default privacy policies, as they have the highest impact on today's systems.

Detecting Influential Bloggers in a Blogging Community [3]

Distributed Systems Lab, USF, Tampa, FL **Spring 2012**

This work studies the problem of identifying influential bloggers in a blogging community, Blog-Catalog, by using network centrality metrics. Our analysis shows that bloggers are connected in a core-periphery network structure, with the highly influential bloggers well connected with each others forming the core, and the non-influential bloggers at the periphery. The six node centrality

metrics we analyzed are highly correlated, showing that an aggregate centrality score as a measure of influence will be stable to variations in centrality metrics.

PRAT: a Metric for Measuring Testing Quality in Scrum [5]
SoftwarePeople, Dhaka-Denmark   **March, 2010 - July, 2011**
Scrum methodology has originated from agile software development as an elixir to software projects which are behind the schedule or which are highly likely to have a problematic development phase. Also unlike any other agile methodology, scrum is adaptive in nature. Our work presents a metric that focuses on measuring test quality in scrum. As product quality and process quality is closely correlated, improved test quality can ensure high quality deliverable product. Proposed metric measures test quality of each sprint/ iteration of scrum based upon some factor ratings which can be used to get a comprehensive test quality overview of testing process over longer periods.

Test Case Prioritization for Regression Testing [4]
SoftwarePeople, Dhaka-Denmark   **March, 2010 - July, 2011**
Test case prioritization techniques involve scheduling test cases for regression testing in an order that increases their effectiveness at meeting some performance goal. Using information obtained from previous test case execution, prioritization techniques order the test cases for regression testing so that most beneficial are executed first thus allows an improved effectiveness of testing. One performance goal, rate of dependency detected among faults, measures how quickly dependency among faults are detected within the regression testing process. An improved rate of fault dependency can provide faster feedback on software and let developers start debugging on the severe faults that cause other faults to appear later. This research presents a new metric for assessing rate of fault dependency detection and an algorithm to prioritize test cases.

Benchmark Analysis of PC server [6]
Bangladesh University of Engineering and Tech.,   **July, 2008 - August, 2009**
The performance of PC server depends upon the performance of its various hardware units. The performance of the hardware units can be measured using features that characterize them. In this work we measured the performance of individual hardware units using self developed analyzer tools and exploited accumulated data to assess the overall performance of PC server.

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<tr><td>Professional
Experience</td><td>

Yahoo! Research Labs, Barcelona Spain
Research intern   **September, 2013 - present**
Understanding and mitigating the social contagion of unethical behavior in user-generated content systems

SoftwarePeople — Enfatico — Y & R Brands, Copenhagen Denmark
Software Engineer   **March, 2010 - July, 2011**
Define Testing Methodologies, Designing Test Plans and Test Cases, Software Testing (Unit Testing, Functional, Integration, Performance, Quality Metrics)
Worked on following four major projects.

- *DellShare* - DellShare is the briefing, production workflow and content management system used by TeamDell, Dell and their vendors to optimize the production of marcom material. It allows the briefing of any marketing project, from a simple banner to a complex website or catalog.

- *MediaSyd*- MediaSyd is a marketing operational management solution for MediaSyd, Denmark. They use it for briefing, production workflow and content management.

- *UM*- User management. An automated solution of authenticating users for certain tools and privileges.

- *BrandShare*- A MOM solution for large international clients like Sears, InterSport.

Delta Life Insurance Co. Limited, Dhaka, Bangladesh

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Software Developer   **September, 2009 - December, 2009**
Worked on following two projects.

- Developed a software for remote data transfer to transmit data from oracle database through VPN.
  Development Languages: C# and Oracle (11g), Oracle (9i).
  Tool for development: Visual Studio 2008, Sql Developer

- Official website of Delta Life Insurance Co. Limited.
  www.deltalifebd.com.
  Development Language: ASP.Net, Ajax and Oracle (11g).
  Tool for development: Visual Studio 2008, Sql Developer.

Binary Solutions, Dhaka, Bangladesh
Software Developer   **November, 2008 - August, 2009**
Worked on following two projects.

- Developed EasyShare, a share market analyzing software which collects data from Dhaka Stock Exchange server and shows comparative market situation.

- Worked in the development team of a banking software.

ACADEMIC
EXPERIENCE

University of South Florida, Tampa, Florida USA
Research Assistant under Dr. Adriana Iamnitchi   **Summer 2012-Summer 2013**
Semantic Implementation of Privacy as Contextual Integrity in Social Ecosystems.

University of South Florida, Tampa, Florida USA
Teaching Assistant in Undergraduate Program Design   **Spring 2012**
Shared responsibility for exams, homework assignments, and grades.

University of South Florida, Tampa, Florida USA
Teaching Assistant in Discrete Structures and Object oriented Design   **Fall 2011**
Shared responsibility for exams, homework assignments, and grades.

University of Information Technology and Sciences (UITS), Dhaka Bangladesh
Instructor in Computer Science Department   **Spring 2009**

- Taught full time courses (C Programming, System Analysis and Design) and interacted with undergraduate students

- Assessed students' performance with quizzes, exams and programming assignments

- Gained deep understanding of the teaching complexities

- Practiced effective communication of new concepts to a large student audience

TECHNICAL
SUMMARY

- Programming Environment: IDLE, NetBeans, Eclipse , Microsoft Visual Studio , GCC, Dream Weaver.
- Languages: C, C++, Java, C#, ASP, Python, Assembly (Intel 8086), UNIX Shell Scripting, SQL, PL/SQL, Prolog, OpenGL, HTML, MATLAB,VHDL, SPICE.
- Database: Oracle, MS Access, SQL Server, MongoDB
- Modeling: UML, ERD, Sketch Up, OpenGL
- Compiler Tools: LEX, YACC
- Network Analysis Tools: Packet Tracer, CSIM20, TCP/IP, WireShark
- Social Network Analysis Tools: NetworkX, JUNG, SNAP, Gephi
- Applications: LaTeX, Gnuplot

PROFESSIONAL
ACTIVITIES

External reviewer for journals: IEEE Transactions on Parallel and Distributed Systems.
External reviewer for conferences: ACM Cloud and Autonomic Computing conference'13.

TALKS

- *Aegis: A Semantic Implementation of Privacy as Contextual Integrity in Social Ecosystems*
  - Eleventh IEEE Conference on Privacy, Security and Trust (PST)
  Catalonia, Spain, July 2013

- *How Influential are You: Detecting Influential Bloggers in a Blogging Community*
  - 4th International Conference on Social Informatics
  Lausanne, Switzerland, December 2012

- *Test Case Prioritization for Regression Testing Based on Fault Dependency*
  - IEEE 3rd International Conference on Electronics Computer Technology
  Kanyakumari, India, April 2012

HONORS AND AWARDS

- Travel Grant to the 4th International Conference on Social Informatics' 12, Lausanne, Switzerland

- SoftwarePeople travel grant to the IEEE 3rd International Conference on Electronics Computer Technology'11, Kanyakumari, India

- Tau Beta Pi Engineering Honor Society, 2012

- Deans List Scholarship, 2009

- CSE Academic merit Scholarship, 2006, 2007

- University Engineering Scholarship, 2006,2007, 2008

EXTRACURRICULAR ACTIVITIES

- Occasionally wrote short stories and fictions. *"Shon Yet O Ekjon"* a fiction book of mine was brought out by Bangladesh Mathematical Society, 2004

- Active Member of voluntary blood donation organization *"Badhon"*

- Volunteer Engineering EXPO, USF, 2012

- Editor of *"Dimik"*, a souvenir of CSE dept. Graduate Batch from BUET, 2009

REFERENCES

Dr. Adriana Iamnitchi
Associate Professor
Computer Science and Engineering
University of South Florida
Tampa, Florida USA
anda@cse.usf.edu

Dr. John Skvoretz
Professor, AAAS Fellow,
Department of Sociology
University of South Florida
Tampa, Florida USA
jskvoretz@usf.edu