Abu Awal Md Shoeb
Graduate Student, Dept. of Computer Science
Rutgers University, New Brunswick, NJ

575 Easton Ave, Apt 14D
Somerset, NJ 08873
abu.shoeb@rutgers.edu | 815-981-1893 | www.shoeb.info

Profile Research experience in Green Computing, Green Data Center, Cloud Computing (Amazon EC2 and S3), Cyber Security, Hadoop, Data Mining, Machine Learning, Proficient in Domain Hosting and Web Development

Education

Rutgers University, New Brunswick, NJ
PhD in Computer Science. *Fall 2015 - present*

University of Alabama at Birmingham (UAB)
M.Sc. in Computer and Information Sciences, *Spring 2015*

Shahjalal University of Science and Technology (SUST), Bangladesh
B.Sc. in Computer Science and Engineering (GPA 3.70/4.00), August 2008

Work Experience

Rutgers University, New Brunswick, NJ
Teaching Assistant, Dept. of Computer Science, Fall 2015 - present

MedSnap LLC, Birmingham, Alabama
Software Engineer Intern, *Summer 2014 and 2015*
- *Medication Safety and Data Visualization that include Performance analysis of OpenCV application in EC2, use of Amazon S3 for large image data and d3 JavaScript framework for data visualization.*

University of Alabama at Birmingham (UAB)
Research Assistant, SeCuRE and Trustworthy Computing Lab (SECRETLab), *Fall 2013-Spring 2015*

Shahjalal University of Science and Technology (SUST), Bangladesh
Lecturer, Dept. of Computer Science and Engineering, July 2009 – July 2013

United Nations Development Programme (UNDP), Bangladesh
e-Service Programmer, *December 2008 – June 2009*

Center for Research Testing and Consultancy, CSE, SUST
Coordinator, August 2009 – June 2010
- Designed and implemented first ever mobile SMS based registration system for undergraduate admission test at SUST, Bangladesh

Criss Cross Computers, Sylhet, Bangladesh (www.crisscrossbd.com)
Co-Founder, *2006 - present*
- Designed and implemented first ever e-payment system for university students in Bangladesh

Selected Research Projects
Design and implementation of global resource manager for green Hadoop and Cassandra, *Fall 2015 - Present*
Determining and improving the quality of Wikipedia's article from statistical analyses, *Spring 2015*
Forensics Analysis of a Hard Drive using EnCase, *Spring 2015*
Sockpuppet detection in Wikipedia using machine learning techniques, *Fall 2014*
Spam email campaign Detection using data mining, *Spring 2014*

Selected Publications
"Spam Campaign Cluster Detection Using Redirected URLs and Randomized Sub-Domains", **Abu Awal Md Shoeb**, Dibya Mukhopadhyay, Shahid Al Noor, Alan Sprague, Gary Warner, Social Informatics 2014, December 14-16, 2014, Cambridge, MA, USA (Best Paper Award)

"A Comparative Study on I/O Performance between Compute and Storage Optimized Instances of Amazon EC2", **Abu Awal Md Shoeb**, Ragib Hasan, Md. Haque, and Meng Hu, IEEE Cloud 2014, June 27 – July 2, Alaska, USA

Extra Curricular
President, Rutgers Graduate Student Association (GSA), Summer 2016-present
Graduate Mentor, Douglass-DIMACS Computing Corps, Rutgers University, Fall 2015-present

Computer Skills
Languages: C, Java, Python, HTML, CSS, PHP, JavaScript, MySQL, Oracle, PostgreSQL, Sqlite, MatLab
Others: Linux, Ubuntu, Cent OS, Amazon EC2 and S3, OpenStack, Hadoop, Latex, Gitorious, Vagrant (a virtual development environment), Joomla, Wordpress
Data Analysis Tools: JMP, WEKA, d3 JavaScript Framework
Computer Forensics Tool: EnCase

Abu Awal Md Shoeb
Graduate Student, Dept. of Computer Science
Rutgers University, New Brunswick, NJ
abu.shoeb@rutgers.edu | 815 981 1893 | www.shoeb.info

Research Projects Descriptions:

- **Global Resource Manager for Green Datacenter to Support Green Hadoop and Cassandra**
  Designing and implementing of a datacenter-level resource manager for green Hadoop and green Cassandra. This resource manager needs to track the intermittent production of on-site renewable energy, and negotiate with various frameworks (e.g., Hadoop, Cassandra, etc.). Along with grid energy, that may have dynamic pricing, the resource manager decides to the best use of the intermittent green energy.

- **Improving the Quality of Wikipedia's Article from Statistical Analyses (Spring 2015)**
  Identified many potential attributes in terms of readability score that are responsible for making an article hard or easy to read. The higher the score is the more difficult it is to read an article. I have collected values of all potential attributes from about 45 thousand Wikipedia's article from various categories. Finally, the relationship between readability and all potential attributes has been analyzed and measured using JMP, a computer program for statistics.

- **Forensics Analysis of a Hard Drive using EnCase (Spring 2015)**
  A hard drive was analyzed thoroughly and prepared examiner's log to answer several questions related to the case. The log includes System Information, Registry Information, etc. In conclusion, the intention of the user of the hard drive was also identified.

- **Sockpuppet Detection in Wikipedia using Machine Learning Techniques (Fall 2014)**
  Sockpuppet is a false user who deceptively intends to manipulate an article in Wikipedia. Our semi-automatic tool can detect a Sockpuppet based on their posts and comments using authorship attribution. I modified our classifier and added new features to the feature matrix which yields a new accuracy from 70% to 82%.

- **Spam Email Campaign Detection using Data Mining (Spring 2014)**
  A huge number of URLs, arriving in spam email, eventually points to a much smaller set of redirected URLs. We present a method to cluster spam emails into spam campaigns using Redirected URLs and Randomized Sub-domains. We analyzed 150K spam emails collected from various sources which produced a tremendous result in spam campaign detection.

- **Performance Analysis of Amazon EC2 Instances (Fall 2013)**
  We disprove several common conceptions regarding the performance and cost of cloud computing by experimenting on instances of two different families (Compute Optimized and Storage Optimized) of the most popular cloud platform, Amazon Elastic Compute Cloud (EC2).

- **Performance analysis of OpenStack over multiple nodes (Fall 2013)**
  Setup OpenStack in lab to simulate the behavior of multiple applications in cloud computing environment. Use multiple physical machines in same network to create instances from OpenStack dashboard.

- **Online Payment System for University Student in Bangladesh**
  As a co-founder of Criss Cross Computers (www.crisscrossbd.com) in Bangladesh, I designed and implemented a complete online payment service for the students in Bangladesh. With the help of our service, students can easily apply and make payments for their transcripts. We also deliver their transcripts worldwide via international courier services. As a result, they do not need to go to the university in person to apply and get their transcripts.