Shaiful Alam Chowdhury

Contact

Address: 603L - Michener Park NW, Edmonton, AB, T6H5A1, Canada
Phone: +1 (780) 902-7964
email: shaiful@ualberta.ca

Education

Degree	PhD in Computing Science
Period	September 2014 — Present
Institution	University of Alberta | Edmonton, Canada
Thesis	"Software Energy Efficiency" | Advisor: Dr. Abram Hindle
GPA	4/4
Achievement	**PhD Early Achievement Award.**

Degree	Master of Science in Computer Science
Period	September 2011 — August 2013
Institution	University of Saskatchewan | Saskatoon, Canada
Thesis	"Characterizing Popularity Dynamics of User-generated Videos: A Category-based Study of YouTube"
GPA	88.6%
Achievement	**Nominated for Best Thesis Award.**

Degree	Bachelor of Science in Computer Science & Engineering
Period	June 2003 — May 2009
Institution	University of Chittagong | Chittagong, Bangladesh
Thesis	"Performance Comparison of CSMA and IEEE 802.11 in Wireless Sensor Networks using GloMoSim Simulator"
GPA	3.87/4
Achievement	**Ranked 1st with Record GPA for the Department.**

Graduate Courses

- Introduction to Machine Learning (**4/4**)
- Parallel and Distributed Systems (**4/4**)
- Software Energy Efficiency (GreenMining) (**4/4**)
- Systems performance evaluation (**86%**)
- Bioinformatics and Computational Biology (**91%**)
- Computer Networks and Distributed Systems (**87%**)
- Advanced Parallel and Distributed Systems (**90%**)
- Research Methods and Topics (**89%**)

Publications

2018	*Shaiful Alam Chowdhury*, Stephanie Borle, Stephen Romansky, Abram Hindle, "*GreenScaler : Training Software Energy Models With Automatic Test Generation*", Journal of Empirical Software Engineering, 2018, Springer.
2017	*Shaiful Alam Chowdhury*, Silvia Di Nardo, Abram Hindle, Zhen Ming (Jack) Jiang, "*An Exploratory Study on Assessing the Energy Impact of Logging on Android Applications*", Journal of Empirical Software Engineering, Springer.
2017	Stephen Romansky, Neil Borle, *Shaiful Alam Chowdhury*, Abram Hindle, Russ Greiner, "*Deep Green: modelling time-series of software energy consumption*", In 33^{rd} IEEE International Conference on Software Maintenance and Evolution (ICSME 2017), Shangai, China.
2016	*Shaiful Alam Chowdhury*, Abram Hindle, "*GreenOracle: Estimating Software Energy Consumption with Energy Measurement Corpora*", In 13^{th} International Conference on Mining Software Repositories (MSR 2016). May 14-15, 2016. Austin, Texas.
2016	*Shaiful Alam Chowdhury*, Abram Hindle, "*Characterizing Energy-Aware Software Projects: Are They Different?*", In 13^{th} International Conference on Mining Software Repositories (MSR 2016, Challenge track). May 14-15, 2016. Austin, Texas.
2016	*Shaiful Alam Chowdhury*, Varun Sapra, Abram Hindle, "*Client-side Energy Efficiency of HTTP/2 for Web and Mobile App Developers*", In 23^{rd} IEEE International Conference on Software Analysis, Evolution, and Reengineering (SANER 2016). March 14-18, 2016. Osaka, Japan.
2015	*Shaiful Alam Chowdhury*, luke kumar, Toukir Imam, Mohomed Jabbar, Varun Sapra, Karan Aggarwal, Abram Hindle, Russell Greiner, "*A System-call based Model of Software Energy Consumption without Hardware Instrumentation*", In Sixth International Conference on Green and Sustainable Computing Conference, December, 2015, Las Vegas, US.
2015	*Shaiful Alam Chowdhury*, Abram Hindle, "*Mining StackOverflow to Filter out Off-topic IRC Discussion*", In 12th Working Conference on Mining Software Repositories (Challenge track), May 16-17, 2015. Florence, Italy (**Won the Best Mining Challenge Paper Award**).
2014	*Shaiful Alam Chowdhury* and Dwight Makaroff, "*Category-based User Interaction with Online User-Generated Videos: Workload Characterization*", In CASCON 2014 - Emerging Technologies Track, 4 pages, pp. 367-370, Toronto, ON, Canada, November 2014.
2014	*Shaiful Alam Chowdhury*, Dwight Makaroff, "*Category-Based YouTube Request Pattern Characterization*" Web Information Systems and Technologies (WEBIST Best Selected Papers), Lecture Notes in Business Information Processing (LNBIP), 154-169, Springer-Verlag.
2014	Khadija Rasul, *Shaiful Alam Chowdhury*, Dwight Makaroff and Kevin G. Stanley, "*Community-based Forwarding for Low-Capacity Pocket Switched Networks*", 17th ACM International Conference on Modeling, Analysis and Simulation of Wireless and Mobile Systems, September 2014, Montreal, Canada.

2013	*Shaiful Alam Chowdhury*, Dwight Makaroff, "*Popularity Growth Patterns of YouTube Videos: A Category-based Study*" , In WEBIST 2013, 233-242, 8-10 May, Aachen, Germany (**Nominated for Best Paper Award**).
2012	Jagmohan Chauhan, *Shaiful Alam Chowdhury* and Dwight Makaroff, "*Performance Evaluation of Yahoo! S4: A First Look*", In IEEE 3PGCIC 2012, Victoria, Canada.
2012	*Shaiful Alam Chowdhury*, Dwight Makaroff, "*Characterizing Videos and Users in YouTube: A Survey*", In IEEE BWCCA 2012, Victoria, Canada.
2010	*Shaiful Alam Chowdhury*, Md. Tauhidul Islam, "*Performance comparison of CSMA and IEEE 802.11 in Wireless Sensor Networks using GloMoSim and IEEE 802.11 as a gimmick*" International Journal of Computer Science and Network Security (IJCSNS), Vol. 10 No. 10 pp. 137-143.
2010	Shahid Al Noor, Golam Mustafa, *Shaiful Alam Chowdhury*, Zakir Hossain, Fariha Tasmin Jaigirdar, "*A Proposed Architecture of Cloud Computing for Education System in Bangladesh and the Impact on Current Education System*", International Journal of Computer Science and Network Security (IJCSNS), Vol. 10 No. 10 pp. 7-18.
2009	*Shaiful Alam Chowdhury*, Mohamamd Tauhidul Islam, Fariha Tasmin Jaigirdar, Md. Rokan Uddin Faruqui, Shahid Al Noor, "*Performance study and simulation analysis of CSMA and IEEE 802.11 in Wireless Sensor Networks and limitations of IEEE 802.11*", In ICCIT 2009, 21-23 December, 2009, Dhaka, Bangladesh, Pages 431-436.

Research Experience

Apr—Aug 2015	Research Assistant (part time), Dept. of Computing Science, University of Alberta, Canada. I have worked with Dr. Hindle focusing energy efficient system developement.
Jan—Aug 2014	Jr. Research Staff (Intern), Saskatchewan Telecommunications (SaskTel), Regina, Canada. Completed Projects: MaxTV Traffic Analysis—in order to understand poor performance in video delievery; Visualization of MaxTV customer behavior to predict churn—finding customer attributes that can indicate dissatisfying video watching experience; Temperature Monitoring System for Video Encoders—an online system to observe servers malfunction to take immediate action; and Data Mining and Machine learning techniques to develop a customer churn prediction system.
Sep—Dec 2013	Jr. Research Staff (Intern), Telecommunication Research Labs (TRLabs), Regina, Canada. Completed Projects: Statistical analysis of customers' attributes to identify the predictors of possible churn events.

Teaching Experience

Jan—Apr 2017	Teaching Assistant (part time), Introduction to the Foundations of Computation I, Dept. of Computing Science, University of Alberta, Canada. Conducted lab classes and evaluated assignments.

Jan—Apr 2016	Teaching Assistant (part time), Operating System Concepts, Dept. of Computing Science, University of Alberta, Canada. Conducted lab classes and evaluated assignments.
Sep—Dec 2015	Teaching Assistant (part time), Introduction to Tangible Computing I, Dept. of Computing Science, University of Alberta, Canada. I was responsible to help students to understand assignment related problems. I also evaluated assignments and projects.
Jan—Apr 2015	Teaching Assistant (part time), Software Engineering, Dept. of Computing Science, University of Alberta, Canada. I was responsible to help the students to develop an Android tool using software engineering approach. I also evaluated the students' projects.
Sep—Apr 2013	Teaching Assistant (part time), Programming with C++ (4 months) and Operating Systems (4 months), Dept. of Computer Science, University of Saskatchewan, Canada. Evaluating students' assignments, mid-term and final exam papers. And to provide feedback to the instructors towards improving course materials.
Jun 2009—Aug 2011	Lecturer (full time), Dept. of Computer Science, Stamford University, Bangladesh. I taught C, C++, Java, Data Structure, Algorithms, Theory of Computation, and Operating Systems. Supervising undergraduate students to complete their projects/thesis was also my responsibility.
Jan—Jun 2011	Lecturer (part time), Dept. of Business Administration, IIUC-Dhaka Campus, Bangladesh. I taught IT related courses and provided feedback to the academic committee to improve the course materials.

Major Awards/Scholarships

Sep 2014—Present	Alberta Innovates -Technology Futures Graduate Student Scholarship (AITF) University of Alberta, Canada.
Aug 2016	Winner: Computing Science Early Achievement Award (PhD) University of Alberta, Canada.
Jan 2016	Devendra Jindal Graduate Scholarship University of Alberta, Canada.
Sep 2015	Runner-up: Computing Science Early Achievement Award (PhD) University of Alberta, Canada.
May 2015	MSR Mining Challenge Award 2015 Sponsored by IBM Research.
Sept 2014	Doctoral Recruitment Scholarship University of Alberta, Canada.
Sep 2011—Aug 2013	International Dean's Scholarship University of Saskatchewan, Canada.
May 2013	College of Graduate Studies and Research Travel Award University of Saskatchewan, Canada.

2013	Sweden-Bangladesh Trust Fund
Sep 2012	College of Graduate Studies and Research Travel Award University of Saskatchewan, Canada.

Services

2018	Reviewer, IEEE Transactions on Software Engineering (IEEE)
2017	Reviewer, Journal of Systems and Software (Elsevier)
2016	Reviewer, IEEE Software (IEEE)
2016	Reviewer, Journal of Applied Computing and Informatics (Elsevier)

Certifications

Dec 2013	Machine Learning (Coursera) (GPA: 100%) Dr. Andrew Ng, Stanford University
Oct 2013	Algorithms: Design & Analysis II (Coursera) (GPA: 99%) Dr. Tim Roughgarden, Stanford University
Aug 2013	Algorithms: Design & Analysis I (Coursera) (GPA: 95.5%) Dr. Tim Roughgarden, Stanford University

Technical Skills

Languages	C, C++, Java, Python, Perl, Octave/Matlab, PHP, JQuery, nesC.
APIs	Python YouTube API, Google Chart API.
Database	MySQL, Microsoft SQL, ORACLE.
Tools	Git, SVN, LaTeX.

Programming contests

2012	University of Saskatchewan Programming Contest. 4^{th} position.
2006	ACM-ICPC Asia Regional Dhaka site. Honorable mentions.

Completed Projects

2014	MaxTV traffic analysis, SaskTel, Canada.
2014	Customer churn prediction model, SaskTel, Canada.
2014	Visualization of MaxTV customer behavior to predict churn, SaskTel, Canada.
2014	Temperature monitoring system for video encoders, SaskTel, Canada.
2013	DelaySim: A simulation environment for routing in Delay Tolerant Networks. University of Saskatchewan, Canada.

2013	YouSim: A simulator to generate realistic YouTube video access patterns. University of Saskatchewan, Canada.
2012	YouTube crawler using Python client library and YouTube API. University of Saskatchewan, Canada.
2008	Result processing system, University of Chittagong, Bangladesh.

Training & Workshops

2015	President Training (Student organization) University of Alberta, Canada.
2009	Faculty Training Program Center for Excellence, Stamford University, Bangladesh.
2008	CISCO Networking Course New Horizon, Chittagong, Bangladesh
2008	Workshop on "NoSql" BASIS, Dhaka, Bangladesh
2007	Workshop on Linux Distribution & Content Management System University of Chittagong, Bangladesh

Leadership Skills

2017	Elected Advisor and Admin of VP-events, Royal Bengal Cricket Club, Edmonton, Canada. We started this club in 2017. We won the champion trophy in the 3^{rd} division of Edmonton & District Cricket League. Follow us: https://www.facebook.com/rbcc11/
2015	Elected President, Bangladeshi Students Association at University of Alberta (BSAUA). Besides helping the new Bangladeshi students at University of Alberta with finding appropriate accommodation, we are responsible to organize and arrange different events throughout the year: Freshers reception, annual cultural program, annual picnic, annual sports competition, celebrating the International Mother Language day, and so on.
2008	Lead Organizer, Annual Picnic, Dept. of Computer Science University of Chittagong, Bangladesh.
2001	Sports Secretary, Naherpur Somaj Kollan Porishad (NSKP) Chittagong, Bangladesh.

Reference

Available upon request.