ENAMUL HOQUE PRINCE

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RESEARCH INTERESTS

My research focuses on combining information visualization and human-computer interaction with natural language processing to address the challenges of the information overload problem. In particular, I design and develop both text analysis and interactive visualization techniques to explore a large amount of data.

EDUCATION

09/ 2012- 04/2017   University of British Columbia (UBC), Canada
PhD Candidate in Computer Science
Advisor: Dr. Giuseppe Carenini
Committee members: Dr. Tamara Munzner and Dr. Raymond T. Ng
Thesis: Visual Text Analytics for Asynchronous Online Conversations

01/ 2010- 01/2012   Memorial University of Newfoundland (MUN), Canada
MSc in Computer Science
Advisors: Dr. Orland Hoeber and Dr. Minglun Gong
Thesis: Concept-based query expansion and interactive visualization for Web image search

03/2003- 08/2007   Chittagong University of Engineering & Technology (CUET), Bangladesh
BSc in Computer Science & Engineering

RESEARCH EXPERIENCE

05/2016- 08/2016   Tableau Software, Palo Alto, CA, USA
Research Intern,
Developed a natural language interface for exploring visualizations

01/2016- 05/2016   Qatar Computing Research Institute (QCRI), Qatar
Research Associate
Developed and deployed an intelligent visual interface for supporting the exploration of community question answering forums [C9, D1]; developed and evaluated a speech act classifier [C7] in collaboration.

09/2012- 01/2016   University of British Columbia, Canada
Research Assistant
Worked on PhD dissertation [J6, J7, C5, C6, W4]

09/2012- 04/2013,   University of British Columbia, Canada
09/2016-present   *Research Assistant*
Developed InfoVis systems and ran user studies in the Advanced Tools for

User-Adaptive Visualization (ATUAV) project [J5, C4, W2, W3]

01/2010- 12/2011 Memorial University of Newfoundland, Canada
Research Assistant
Worked on MSc thesis [J3, J4, C3, W1]

TEACHING EXPERIENCE

Teaching Assistant, University of British Columbia

Fall 2016, Fall 2015 CPSC 422: Artificial Intelligence 2

Summer 2015 CPSC 213: Introduction to Computer Systems

Winter 2010, Fall 2010, Winter 2011 *Teaching Assistant*, Memorial University of Newfoundland
CS 1700: Computer Basics

03/2008-12/2009 *Lecturer*, Chittagong University of Engineering and Technology

2009 Object Oriented Programming

2008 Computer Basics and Programming

2008 Algorithm Design

2008 Computer Graphics

2008 Fuzzy Logic & Neural Network

REFEREED PUBLICATIONS

JOURNAL PAPERS **[J7] E. Hoque** and G. Carenini, Interactive topic modeling for exploring asynchronous online conversations: design and evaluation of ConVisIT, *ACM Transactions on Interactive Intelligent Systems (TIIS)*, Vol. 6, No 1, pp. 7:1-7:24, 2016.

[J6] E. Hoque and G. Carenini, ConVis: A visual text analytic system for exploring blog conversations, *Journal of Computer Graphics Forum (Proc. EuroVis)*, Vol. 33, No. 3, pp. 221-230, 2014, (AR: 22.9%).

[J5] C. Conati, G. Carenini, **E. Hoque**, B. Steichen, D. Toker, Evaluating the impact of user characteristics and different layouts on an interactive visualization for decision making. *Journal of Computer Graphics Forum (Proc. EuroVis)*, Vol. 33, No. 3, pp. 371-380, 2014, (AR: 22.9%).

[J4] E. Hoque, O. Hoeber, M. Gong, CIDER: Concept-based image diversification, exploration, and retrieval, *Journal of Information Processing & Management (IPM)*, Vol. 49, No 5, pp. 1122-1138, 2013.

[J3] E. Hoque, O. Hoeber, M. Gong, Balancing the trade-offs between diversity and precision for Web image search using concept-based query expansion, *Journal of Emerging Technologies in Web Intelligence (JETWI)*, Vol: 4, No 1, pp. 26-34, 2012.

[J2] E. Hoque, O. Hoeber, G. Strong, M. Gong, Combining conceptual query expansion and visual search results exploration for Web image retrieval,

*Journal of Ambient Intelligence and Humanized Computing (**JAIHC**)*, Vol. 4, No. 3 pp. 389-400, 2011.

[J1] G. Hossain, **E. Hoque**, M. I. Monir, M. A. Sharif, Automatic stemming and its impact in Bangla information retrieval, *Computer Science and Engineering Research Journal (**CSERJ**)*, Vol. 5, pp. 17-23, ISSN: 1990-4010, 2008.

CONFERENCE
PAPERS

[C9] E. Hoque S. Joty, L. Màrquez, and G. Carenini, CQAVis: Visual Text Analytics for Community Question Answering, In *Proceedings of ACM Intelligent User Interfaces (**IUI**)*, 2017 (accepted).

[C8] S. Joty and **E. Hoque**, Speech Act Modeling of Written Asynchronous Conversations with Task-Specific Embeddings and Conditional Structured Models, *Proceedings of the 54th Annual Meeting of the Association for Computational Linguistics (**ACL**)*, pp. 1746–1756, 2016.

[C7] E. Hoque and G. Carenini, MultiConVis: A Visual Text Analytics System for Exploring a Collection of Online Conversations, pp. 96-107 In *Proceedings of ACM Intelligent User Interfaces (**IUI**)*, 2016 (AR: 25.89%).

[C6] E Hoque, S. Joty, L. Màrquez, A. Barrón-Cedeño, G. Martino, A. Moschitti, P. Nakov, S. Romeo, and G. Carenini, An Interactive System for Exploring Community Question Answering Forums, *International Conference on Computational Linguistics (**COLING**)*, 2016.

[C5] E. Hoque and G. Carenini, ConVisIT: Interactive Topic Modeling for Exploring Asynchronous Online Conversations, In *Proceedings of ACM Intelligent User Interfaces (**IUI**)*, pp. 169-180 2015, (AR: 22.9%).

[C4] G. Carenini, C. Conati, **E. Hoque**, B. Steichen, D. Toker, J. Enns, Highlighting interventions and user differences: informing adaptive information visualization support, In *Proceedings of The ACM Conference on Human Factors in Computing Systems (**CHI**)*, pp. 1835-1844, 2014 (AR: 23%).

[C3] E. Hoque, G. Strong, O. Hoeber, M. Gong, Conceptual query expansion and visual search results exploration for Web image retrieval, In *Proceedings of the Atlantic Web Intelligence Conference (**AWIC**)*, pp. 73-82, 2011.

[C2] G. Strong, **E. Hoque**, M. Gong, and O. Hoeber, Organizing and browsing image search results based on conceptual and visual similarities, In *Proceedings of the International Symposium on Visual Computing*, pp. 481-490, 2010.

[C1] E. Hoque, G. Hossain, A. A. Dewan, P. Debnath, An audible Bangla text entry method in mobile phones with intelligent keypad design, In *Proceedings of the International Conference on Computer and Information Technology (**ICCIT**)*, pp.279-284, 2009, (AR: 31%).

WORKSHOP PAPERS

[W4] E. Hoque, G. Carenini and S. Joty. Interactive Exploration of Asynchronous Conversations: Applying a User-centered Approach to Design a Visual Text Analytic System. In *Proceedings of the Workshop on Interactive Language Learning, Visualization, and Interfaces (ILLVI 2014)*, in conjunction with the **ACL-2014**, Baltimore, USA.

[W3] G. Carenini, C. Conati, **E. Hoque**, B. Steichen, User Task Adaptation in Multimedia Presentations. *Proceedings of the Workshop on User-Adaptive Information Visualization (WUAV 2013)*, in conjunction with the 21st conference on User Modeling, Adaptation and Personalization (**UMAP 2013**), Rome, Italy, June 2013.

[W2] C. Conati, **E. Hoque**, D. Toker, B. Steichen, When to Adapt: Detecting User's Confusion During Visualization Processing, *Proceedings of the Workshop on User-Adaptive Information Visualization (WUAV 2013)*, in conjunction with the 21st conference on User Modeling, Adaptation and Personalization (**UMAP 2013**), Rome, Italy, June 2013.

[W1] E. Hoque, O. Hoeber, M. Gong, Evaluating the trade-offs between diversity and precision for Web image search using concept-based query expansion, *Proceedings of the International Workshop on **Intelligent Web Interaction***, in conjunction with the IEEE/WIC/ACM **International Conference on Web Intelligence**, pp. 130-133, Lyon, France, 2011.

POSTERS

[P1] E. Hoque, O. Hoeber, M. Gong, concept-based interactive visualization approach to Web image search (refereed poster), In *Conference Compendium of the IEEE Information Visualization*, Providence, RI, USA, 2011.

STUDENT CONSORTIUM

[S2] E. Hoque, Visual Text Analytics for Online Conversations: Design, Evaluation, and Applications, In *Companion Publication of the International Conference on Intelligent User Interfaces (IUI)*, pp. 122-125, 2016.

[S1] E. Hoque, Visual Text Analytics for Asynchronous Online Conversations, In *Companion Publication of the International Conference on Intelligent User Interfaces (IUI)*, pp. 105-108, 2015.

BOOK CHAPTERS

[B1] G. Murray, **E. Hoque** and G. Carenini, Opinion Summarization and Visualization, in *Sentiment Analysis in Social Networks*, Eds. Pozzi, Fersini, Messina, Liu. Elsevier, 2016

INVITED TALKS

- MultiConVis: A Visual Text Analytics System for Exploring a Collection of Online Conversations, *UBC Laboratory for Computational Intelligence (LCI) Forum Talk*, Vancouver, BC, January 2017.

- Visual text analytics for online conversations, *Department of Linguistics*, Simon Fraser University, Burnaby, BC, January 2017.

- An overview of text visualization techniques, *UBC School of Library, Archival and Information Studies (iSchool)*, Vancouver, BC, December 2016.

- ConVis: A visual text analytic system for exploring asynchronous online conversations, *The Pacific Northwest Regional NLP Workshop (NW-NLP)*, Microsoft Research, Redmond, April 2014.

- A visual text analytic system for asynchronous conversations, *UBC Laboratory for Computational Intelligence (LCI) Forum Talk*, Vancouver, BC, November 2013.

- Conceptual query expansion and visual search results exploration for Web image retrieval**,** *Department of Computer Science,* Memorial University of Newfoundland, St. John's, NL, November 2010.

STUDENTS MENTORED

2013	Rastko Djeric, Undergraduate directed study project
2013	Kaya Gajos, Undergraduate directed study project
2009	Kazi Shahadat Hossain, Undergraduate thesis
2009	Sumon Deb, Undergraduate thesis
2009	Priyanka Guha, Undergraduate thesis
2008	Pijush Debnath, Undergraduate thesis [**C1**]

AWARDS AND HONORS

2012-2016	Faculty of Science Graduate award, University of British Columbia
2015, 2016	Travel awards*,* IUI Conference
2014	Travel awards*,* ACL Conference
2012	Dean's Doctoral Award, Memorial University of Newfoundland (declined)
2012	Visa differential scholarship, University of Calgary (declined)
2011	Fellow of the School of Graduate Studies, Memorial University
2010-2011	School of Graduate Studies Award, Memorial University of Newfoundland
2003-2007	University Merit Scholarship, Bangladesh
1995-2000	Primary and High School Talent-pool Scholarship, UNICEF and the Government of Bangladesh

PROFESSIONAL ACTIVITIES

Program committee	IUI 2015, IUI 2016, IUI 2017
Referee	EuroVis 2017, IUI 2015, 2016, 2017, Journal of Computational Intelligence, Workshop on Human and Technology (WHAT) 2014
Student volunteer	IUI 2016, ACL 2014, Canadian AI/GI/CRV 2011

Representative	Graduate Student Admission Committee, University of British Columbia, 2016
Vice-President	Bangladesh Student Association, Memorial University of Newfoundland, 2011
Volunteer	CS open house program, Memorial University of Newfoundland, 2010
Organizing secretary	CUET ICT fête, 2010
Coach	Programming teams in national programming contests [2008-09]

AFFILIATION

Student member	ACM, IEEE
Member	Engineers' Institute, Bangladesh

LEGAL STATUS
Permeant resident of Canada

REFERENCES

Giuseppe Carenini
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