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- 05/2017	**University of British Columbia (UBC)**, Canada PhD in Computer Science Advisor: Giuseppe Carenini Committee: Tamara Munzner, Raymond Ng, Sheelagh Carpendale (external) Thesis: *Visual text analytics for online conversations*
01/ 2010- 01/2012	**Memorial University of Newfoundland (MUN)**, Canada MSc in Computer Science Advisors: Orland Hoeber and 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

07/2017- present	**Stanford University**, CA, USA *Postdoctoral scholar* Working with Prof. Maneesh Agrawala in the areas of information visualization and natural language processing
05/2016- 09/2016	**Tableau Software**, Palo Alto, CA, USA *Research Intern* Developed a natural language interface for interaction with visual analytics systems [J8]
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* Developed visual text analytics for online conversations [J6, J7, C5, C6, C9, W4]

09/2012- 04/2013, 09/2016-06/2017	**University of British Columbia**, Canada
	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
	Developed tools and techniques for Web image search [J3, J4, C3, W1]

TEACHING EXPERIENCE

Teaching Assistant, **University of British Columbia**
Marked assignments and exams, answered questions

Fall 2016, Fall 2015	CPSC 422: Artificial Intelligence 2
Summer 2015	CPSC 213: Introduction to Computer Systems

Teaching Assistant, **Memorial University of Newfoundland**
Marked assignments and quizzes, answered questions

2010-11(Winter, Fall)	CS 1700: Computer Basics

Lecturer, **Chittagong University of Engineering and Technology**
Designed course outline, delivered lectures, developed assessments

2009	Object Oriented Programming
2008	Computer Basics and Programming
2008	Algorithm Design
2008	Computer Graphics
2008	Fuzzy Logic & Neural Network

REFEREED PUBLICATIONS

JOURNAL PAPERS

[J8] E. Hoque, V. Setlur, M. Tory, and I. Dykeman, Applying Pragmatics Principles for Interaction with Visual Analytics, *IEEE Transactions on Visualization and Computer Graphics (Proc. **IEEE VAST**)*, 2017.

[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)*, pp. 161-172, 2017(AR: 23%).

[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 (AR: 28%).

[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: 25.9%).

[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 **[W5] E. Hoque**, G. Carenini. Multimedia Summary Generation from Online Conversations: Current Approaches and Future Directions (**EMNLP Workshop on New Frontiers in Summarization**), in conjunction with the **EMNLP 2017**, Copenhagen, Denmark, 2017.

[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

2017   Dae Hyun, PhD student, Stanford University
2013   Rastko Djeric, Undergraduate directed study project, UBC
2013   Kaya Gajos, Undergraduate directed study project, UBC
2009   Kazi Shahadat Hossain, Undergraduate thesis, CUET
2009   Sumon Deb, Undergraduate thesis, CUET
2009   Priyanka Guha, Undergraduate thesis, CUET
2008   Pijush Debnath, Undergraduate thesis [**C1**], CUET

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
2007	University merit Scholarship, Bangladesh
1995-2000	Primary and high school talent-pool scholarship, Government of Bangladesh

PROFESSIONAL ACTIVITIES

Program committee	IUI (2015-2018), NAACL-HLT 2018
Referee	InfoVis 2017, EuroVis 2017, IUI (2015 – 2018), ACM TIIS 2017, Journal of Computational Intelligence, Workshop on Human and Technology 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

Member	ACM, IEEE, ACL

LEGAL STATUS

Permeant resident of Canada

REFERENCES

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