ENAMUL HOQUE PRINCE

Gates Computer Science 3B, Room 375
353 Serra Mall, Stanford University
CA, USA, 94305-1248

+1 415 702 8198
enamul@cs.stanford.edu
https://enamulh.github.io

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
Conducting research in the areas of data visualization, HCI, and natural language processing. Supervisor: Maneesh Agrawala

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, **University of British Columbia**, Canada
09/2016-06/2017 *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 **[J9] Enamul Hoque** and Giuseppe Carenini, Interactive topic hierarchy revision for exploring a collection of online conversations, *Journal of Information Visualization*, 2018.

[J8] Enamul Hoque, Vidya Setlur, Melanie Tory and Isaac Dykeman, Applying pragmatics principles for interaction with visual analytics, *IEEE Transactions on Visualization and Computer Graphics (Proc. **IEEE VAST**)*, 2017 *(21.0% acceptance rate)*.

[J7] Enamul Hoque and Giuseppe 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] Enamul Hoque and Giuseppe 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, *(22.9% acceptance rate)*.

[J5] Cristina Conati, Giuseppe Carenini, **Enamul Hoque**, Ben Steichen and Dereck 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, *(22.9% acceptance rate)*.

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

[J3] Enamul Hoque, Orland Hoeber, Minglun 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] Enamul Hoque, Orland Hoeber, Grant Strong, Minglun 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] Gahangir Hossain, **Enamul 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] Enamul Hoque Shafiq Joty, Lluís Màrquez, and Giuseppe Carenini, CQAVis: Visual text analytics for community question answering, In *Proceedings of ACM Intelligent User Interfaces (IUI)*, pp. 161-172, 2017*(23% acceptance rate)*.

[C8] Shafiq Joty and **Enamul 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 *(28% acceptance rate)*.

[C7] Enamul Hoque and Giuseppe 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 *(25.9% acceptance rate)*.

[C6] E Hoque, S. Joty, Lluís Màrquez, Alberto Barrón-Cedeño, Giovanni Martino, Alessandro Moschitti, Preslav Nakov, Salvatore Romeo, and Giuseppe Carenini, An interactive system for exploring community question answering forums, *International Conference on Computational Linguistics (COLING)*, 2016.

[C5] Enamul Hoque and Giuseppe Carenini, ConVisIT: Interactive topic

modeling for exploring asynchronous online conversations, In *Proceedings of ACM Intelligent User Interfaces (IUI)*, pp. 169-180 2015, (22.9% *acceptance rate)*.

[C4] Giuseppe Carenini, Cristina Conati, **Enamul Hoque**, Ben Steichen, Dereck Toker, James Enns[1], 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 *(23% acceptance rate)*.

[C3] Enamul Hoque, Grant Strong, Orland Hoeber Minglun 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, **Enamul Hoque**, Minglun Gong and Orland 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] Enamul Hoque, Gahangir Hossain, Ali Akbar Dewan, Pijush 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, *(31% acceptance rate)*.

WORKSHOP PAPERS   **[W5] Enamul Hoque**, Giuseppe 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] Enamul Hoque, Giuseppe Carenini and Shafiq 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] Giuseppe Carenini, Cristina Conati, **Enamul Hoque**, Ben 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] Cristina Conati, **Enamul Hoque**, Dereck Toker, Ben 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

---

[1] *Author order is alphabetical except for last author*

Personalization (**UMAP 2013**), Rome, Italy, June 2013.

[W1] Enamul Hoque, Orland Hoeber, Minglun Gong, Evaluating the trade-offs between diversity and precision for Web image search using concept-based query expansion, *Proceedings of the 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] Enamul Hoque**, Orland Hoeber, Minglun 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] Enamul 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] Enamul 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, **Enamul Hoque** and Giuseppe Carenini, Opinion summarization and visualization, in *Sentiment Analysis in Social Networks*, Eds. Pozzi, Fersini, Messina, Liu. Elsevier, 2016.

INVITED TALKS

- Visual text analytics for exploring and understanding large datasets, *University of Victoria*, Canada, February 2018.
- Visual text analytics for exploring and understanding large datasets, *York University*, Canada, February 2018.
- Visual text analytics for exploring and understanding large datasets, *New Jersey Institute of Technology*, USA, February 2018.
- Visual text analytics for exploring and understanding large datasets, *University of Louisiana at Lafayette*, USA, January 2018.
- Visual text analytics for exploring and understanding large datasets, *Nanyang Technological University*, Singapore, January 2018.
- 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)
2012	Best prototype award, Human-computer interaction Graduate course, UBC
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, IJCAI-ECAI 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

Permanent resident of Canada

REFERENCES

Giuseppe Carenini
Associate Professor, Computer Science, University of British Columbia
carenini@cs.ubc.ca, ☎ + 1 (604) 822-5109

Tamara Munzner
Professor, Computer Science, University of British Columbia
tmm@cs.ubc.ca, ☎ + 1 (604) 827-5200

Maneesh Agrawala
Professor, Computer Science, Stanford University
maneesh@cs.stanford.edu, ☎ +1 (650) 723-2642

Vidya Setlur
Staff research scientist, Tableau Software**,** Palo Alto, CA, USA
vsetlur@tableau.com, ☎ +1(650) 382-6203

Lluís Màrquez
Principal Scientist, Qatar Computing Research Institute
lmarquez@qf.org.qa, ☎ +974 33225787

Minglun Gong
Professor, Computer Science, Memorial University of Newfoundland
gong@cs.mun.ca, ☎ +1 (709) 864-3589