

BRENDA REYES AYALA

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EDUCATION

Carnegie Mellon University, Pittsburgh, PA 2005
B.S.in Technical Writing

Georgia Institute of Technology, Atlanta, GA 2008
M.S in Human-Computer Interaction (HCI)

University of North Texas, Denton, TX 2012 - current
Ph.D candidate in Information Science (expected May 2018)
Dissertation title: *A Grounded Theory of Information Quality in Web Archives*

RESEARCH INTERESTS

My research interests are in the areas of Web Preservation, Multilingual Information Access, Natural Language Processing, Information Retrieval, and Machine Learning. I have been working as a Research Assistant for Dr. Jiangping Chen's Multilingual Information Access (MLIA) project, which seeks to help non-native speakers of English access digital library information in their native languages. I recently explored how to use supervised Machine Learning techniques to understand and predict the adequacy and fluency of English-Spanish machine translations

My research spans not only the practical, but also the theoretical. For my dissertation, I seek to create a theoretical model of information quality for web archives. In the near future, I seek to both continue my research, as well as to participate in new and exciting projects.

PUBLICATIONS

- Reyes Ayala, B., Knudson, R., Cao, G., Wang, X., & Chen, J. (in press). Metadata records machine translation combining multi-engine outputs with limited parallel data. *Journal of the Association for Information Science and Technology*. doi: 10.1002/asi.23925
- Reyes Ayala, B. (2017). We need new names: Applying existing models of information quality to web archives. *Bulletin of IEEE Technical Committee on Digital Libraries*, 13(1). Retrieved from <http://www.ieee-tcdl.org/Bulletin/v11n2/>
- Xu, F., Tian, M., Xu, G., Reyes Ayala, B., & Shen, W. (2017). Understanding Chinese users' switching behaviour of cloud storage services. *The Electronic Library*, 35 (2). 214-232. doi: 10.1108/EL-04-2016-0080
- Reyes Ayala, B. (2015). Challenges for web archivists: Issues in the preservation of digital cultural heritage. *Annual Review of Cultural Heritage Informatics*, 3. 151-164. Retrieved from <https://rowman.com/ISBN/9781442263703/Annual-Review-of-Cultural-Heritage-Informatics-2015>
- Reyes Ayala, B., Phillips, M.E, & Ko, L. (2014). Current quality assurance practices in web archiving. UNT Digital Library. <http://digital.library.unt.edu/ark:/67531/metadc333026/>
- Phillips, M.E, Alemneh, D.G, & Reyes Ayala, B. (2014) Analysis of URL references in ETDs: a case study at the University of North Texas. *Library Management*, 35 (4 / 5).
- Reyes Ayala, Brenda. (2013). *Web Archiving Bibliography 2013*. UNT Digital Library. <http://digital.library.unt.edu/ark:/67531/metadc172362/>

POSTERS AND PRESENTATIONS

- Reyes Ayala, B. (2017, June). Web archives: A preliminary exploration of user expectations vs. reality. In E. A. Fox (Chair), *Web Archiving and Digital Libraries*. Workshop conducted at the meeting of the Joint Conference of Digital Libraries, Toronto, Canada.
- Reyes Ayala, B. & Chen, J. (2017, June). *A machine learning approach to evaluating translation quality*. Poster presented at the meeting of the Joint Conference of Digital Libraries, Toronto, Canada.
- Chen, J., Namgoong, M., Reyes Ayala, B., Cao, G., & Wang, X. (2017, March). *Building a multilingual test collection for metadata records*. Poster presented at the iConference 2017, Wuhan, China.
- Reyes Ayala, B. (2015, November). Challenges for web archivists: Issues in the preservation of digital cultural heritage. Presented at the Web Archives 2015 Conference. Ann Arbor, Michigan.
- Reyes Ayala, B. (2014, November). *What makes a good web archive?* Presented at the Best Practices Exchange Conference. Montgomery, Alabama.
- Reyes Ayala, B. & Caragea, C. (2014, November). *Towards building a collection of web archiving research articles*. Poster presented at the American Society for Information Science and Technology 77th Annual Meeting, Seattle, Washington.
- Reyes Ayala, B., Phillips, M.E, & Ko, L. (2014, May). Current quality assurance practices in web archiving. Presented at the International Internet Preservation Consortium (IIPC) General Assembly, Paris, France. Retrieved from <http://digital.library.unt.edu/ark:/67531/metadc287034/>
- Phillips, M.E, Alemneh, D.G & Reyes Ayala, B. (2013, September). *Analysis of URL references in ETDs: A case study at the University of North Texas*. Presented at 2013 International Electronic Theses and Dissertations (ETDs) Symposium. Hong, Kong <http://digital.library.unt.edu/ark:/67531/metadc180957/>
- Reyes Ayala, B. (2013, May). Current quality assurance practices in web archiving. Poster presented at the Texas Conference for Digital Libraries, Austin, TX. Retrieved from <http://digital.library.unt.edu/ark:/67531/metadc159526/>

PROFESSIONAL EXPERIENCE

Department of Information Science, University of North Texas

2015 - Present

Graduate Research Assistant and Lab Manager

Denton, TX

- Contribute to Dr. Jiangping Chen's Multilingual Information Access (MLIA) project, which seeks to apply Machine Translation (MT) technologies for providing services to digital collections in English, Chinese, and Spanish
- Manage the day-to-day operations and oversee the staff of the Intelligent Information Access (IIA) Lab
- Review papers and provide feedback to authors for the journal *The Electronic Library*
- Serve as Teaching Assistant for Dr. Chen's class Computational Methods for Information Systems (Spring 2016 and Spring 2017)
- Serve as Publicity Chair for the JCDL 2018 conference in Fort Worth, Texas

University of North Texas Libraries

2012 - 2015

Graduate Research Assistant

Denton, TX

- Worked to refine and document the steps in the Quality Assurance (QA) process for archived websites
- Performed QA for over 60 websites for the UNT Digital Library and UNT Cybercemetery
- Configured web crawler, nominated websites, and managed crawls to capture a variety of websites.
- Created survey instruments, performed data analysis, and collaborated in writing the paper "Current Quality Assurance Practices in Web Archiving"
- Created Web Archiving Bibliography: 2,166 Total Uses as of September 2015
- Created Python code and documentation for exploring and extracting needed information from Web Archive files

National Library of Spain/Biblioteca Nacional de España (BNE)

2010 - 2012

Usability Specialist and Web Archivist

Madrid, Spain

- Led the Wikipedia project, a program to improve the quality of the articles about Spanish culture, literature, and history on Wikipedia.
- Assisted with the BNE Web Archive, a project to gather and preserve the content of the .es domain over time.
- Gathered and analyzed traffic and usage data for the BNE website using Google Analytics, utilized search engine optimization techniques to improve the visibility of the BNE in search engine rankings
- Conducted usability and accessibility studies for the website