

SawoodAlam

Web Science and Digital Libraries Researcher


Education


- Current **Ph.D.** in Computer Science Old Dominion University, Norfolk VA - USA
A Framework of Web Archive Profiling for Efficient Memento Aggregation
This thesis will describe a framework to discover what various archives contain. Profiling growing number of archives will enable the Memento Aggregator to efficiently route URI lookups to archives that will likely return good results.
- Aug 2013 **M.S.** in Computer Science Old Dominion University, Norfolk VA - USA
HTTP Mailbox - Asynchronous Restful Communication
This thesis describes the HTTP Mailbox, a mechanism to enable RESTful HTTP communication in an asynchronous mode with a full range of HTTP methods and multicast semantics otherwise unavailable to standard clients and servers.
- May 2008 **B.Tech.** in Computer Engineering Jamia Millia Islamia, New Delhi - India
WIDE: Web Integrated Development Environment
This project report describes development of a platform independent Web-based IDE that supports syntax highlighting, auto suggestion, code folding, remote compilation, and other features in various programming languages.


Appointments

- 2009–Now **ODU Research Foundation** Norfolk VA - USA
Research Asistant
While pursuing M.S. and Ph.D. programs at ODU, I was funded by ODURF as a research assistant and worked on various HTTP, Web, Social Media, Machine Learning, and Archiving related research and development projects.
- 2013–Now **Old Dominion University** Norfolk VA - USA
Teaching Assistant
Occasionally I have been assigned teaching assistantship duties on courses including System Programming, Web Programming, and Discrete Structures. Professors have given an over all “Exceeds Expectations” remark on my work.
- 2008–2009 **Belzabar Software Design** New Delhi - India
Computer Scientist
After my B.Tech., I worked at Belzabar as a developer and computer scientist on client projects including Ixquick, Best Practice Institute, Fantasy Football Sherpa, IHitItBig, and NYC Department of Education. The CEO of the company appreciated my initiative of the ExtJS and Ruby on Rails practice groups in the company. My colleagues gave me the title of “JavaScript Guru”.
- 2006–2008 **Center for Information Technology JMI** New Delhi - India
Project Trainee
I worked on LAMP stack to create Jamia Online Admission Portal to automate the admission application process in the university.
- 2006–2008 **Sarai CSDS** New Delhi - India
Research Fellow
I have got two research grants under FLOSS Fellowship Program from Sarai for Urdu Localization of GNOME Desktop and Urdu OCR.

Contact

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[@ibnesayeed](https://twitter.com/ibnesayeed)
[@ibnesayeed](https://www.instagram.com/ibnesayeed)

Languages

Urdu, Hindi, English
Arabic, Persian, Sanskrit,
and a few other
vernacular languages

Programming

Ruby (on Rails), JavaScript,
HTML, CSS, PHP, Python,
Go, Shell Script

Lexical Signature

Web, Digital Library, Web
Archiving, Ruby on Rails,
PHP, HTML, CSS,
JavaScript, ExtJS, Go,
Urdu, RTL, Docker, Linux

Talks

- Mar, 2017 **Senior Research Projects Evaluation** CS Dept. ODU, Norfolk - USA
Mentored and evaluated CS 410 senior research projects.
- Feb, 2017 **Good News/Bad News** Internet Archive, San Francisco - USA
Demonstrated a machine learning based system to explore local news in the Archives Unleashed 3.0 datathon.
- Jan, 2017 **Introduction to Python** CS Dept. ODU, Norfolk - USA
Given a guest lecture in the Web Science course.
- Dec, 2016 **Senior Research Projects Evaluation** CS Dept. ODU, Norfolk - USA
Mentored and evaluated CS 410 senior research projects.
- Oct, 2016 **Senior Research Projects Evaluation** CS Dept. ODU, Norfolk - USA
Mentored and evaluated CS 410 senior research projects.
- Sep, 2016 **InterPlanetary Wayback: Peer-To-Peer Permanence of Web Archives** HCC, Hannover - Germany
Presented our research work in the TPDL'16 conference.
- Sep, 2016 **Web Archive Profiling Through Fulltext Search** HCC, Hannover - Germany
Presented my research work in the TPDL'16 conference.
- Sep, 2016 **Archive X-Ray - Web Archive Profiling for Efficient Memento Aggregation** HCC, Hannover - Germany
Presented my research progress in the TPDL'16 Doctoral Consortium workshop.
- Jun, 2016 **MemGator - A Portable Concurrent Memento Aggregator** Rutgers, New Brunswick - USA
Gave a lightning talk along with live demonstration and poster of MemGator at WADL'16.
- Jun, 2016 **Archive X-Ray - Web Archive Profiling for Efficient Memento Aggregation** Rutgers, New Brunswick - USA
Presented my research progress in the JCDL'16 Doctoral Consortium workshop.
- Jun, 2016 **MemGator - A Memento Aggregator CLI and Server in Go** Library of Congress, Washington DC - USA
Demonstrated capabilities of the portable Memento aggregator tool in the Archives Unleashed 2.0 datathon.
- Jun, 2016 **Dockerize Your Projects - A Brief Introduction to Containerization** WSDL ODU, Norfolk - USA
Gave an introductory overview of Docker to my research fellows in our research lab at ODU.
- Mar, 2016 **InterPlanetary Wayback (IPWB)** University of Toronto, Toronto - Canada
Demonstrated newly developed archival replay system (IPWB) utilizing IPFS in the Archives Unleashed 1.0 datathon.
- Mar, 2016 **MemGator - A Memento Aggregator CLI and Server in Go** University of Toronto, Toronto - Canada
Introduced newly developed portable Memento aggregator tool in the Archives Unleashed 1.0 datathon.
- Jan, 2016 **Introduction to Python** CS Dept. ODU, Norfolk - USA
Given a guest lecture in the Web Science course.
- Oct, 2015 **Archive X-Ray - Web Archive Profiling for Efficient Memento Aggregation** CS Dept. ODU, Norfolk - USA
Presented my research progress to other fellow researchers in the monthly PhD Gathering.
- Sep, 2015 **Web Archiving: A Brief Introduction** Magdeburg-Stendal University, Magdeburg - Germany
Invited for the Lunch Lecture to introduce Web Archiving and our WSDL Research Group to the SPIRIT Research Group in Germany.
- Sep, 2015 **Quantifying Orphaned Annotations in Hypothes.is** Lecture-Conference Center, Poznań, Poland
Presented my colleague's research work in the TPDL'15 Conference who could not make it there.

- Sep, 2015 **Web Archive Profiling Through CDX Summarization** Lecture-Conference Center, Poznań, Poland
Presented my research work in the TPDL'15 Conference.
- Aug, 2015 **Profiling Web Archives** WSDL ODU, Norfolk - USA
Presented my research work in the WSDL Research Lab on the visit of Dr. Herbert from LANL.
- Jun, 2015 **Profiling Web Archives** UTK, Knoxville - USA
Presented my research work in the Web Archiving and Digital Libraries Workshop at JCDL'15 Conference.
- Jun, 2015 **Improving Accessibility of Archived Raster Dictionaries of Complex Script Languages** UTK, Knoxville - USA
Presented my research work about the Scanned Archived Dictionaries in the JCDL'15 Conference.
- Apr, 2015 **Archive Profile Serialization** Stanford University, Palo Alto - USA
Presented Archive Profile serialization approaches and issues in the IIPC General Assembly 2015.
- Apr, 2015 **Profiling Web Archives** Internet Archive, San Francisco - USA
Presented my research work in the IIPC General Assembly 2015.
- Mar, 2015 **Web Development: Usability, Aesthetics, and Good Practice** CS Dept. ODU, Norfolk - USA
Given a guest lecture in the Web Programming course.
- Oct, 2014 **Web Archiving: A Brief Introduction** CS Dept. JMI, New Delhi - India
Introduce Web Archiving and our WSDL Research Group to the B.Tech. students of the Computer Science Department of Jamia Millia Islamia, India as an alumnus.
- May, 2013 **Media Roundtable on UNICEF India's Campaign on Open Defecation** UNICEF, New Delhi - India
Invited as a media representative from UrduWeb to discuss about the Open Defecation issue in India.
- Nov, 2013 **Envision the Future of Urdu** National Council for Promotion of Urdu Language, New Delhi - India
Met the director of NCPUL and an Urdu editor to discuss the future of the Urdu language on the Web and outline some Urdu related research and development project ideas.
- Nov, 2013 **Urdu Media Editors' conference on Innovations in Education** UNICEF & Shikhar, New Delhi - India
Invited as a media representative from UrduWeb to discuss about the Innovations in Education.
- Nov, 2013 **Urdu in Digital Era and UrduWeb** Center for Information Technology & Urdu Dept. JMI, New Delhi - India
Invited as the chief guest in an extended lecture organized jointly by the CIT and the Urdu Department of JMI University to talk about the current state of the Urdu language and the role of UrduWeb in promoting Urdu on the Web.
- Nov, 2013 **HTTP Mailbox - Asynchronous Restful Communication** CS Dept. JMI, New Delhi - India
Presented my Masters research work to the final year B.Tech. students of the Computer Science Department of Jamia Millia Islamia, India as an alumnus.
- Oct, 2013 **Path to Graduate Studies** Rais Ahmad Inter College, Itwa, Siddhartha Nagar - India
Given an extended lecture to the Senior School (also known as Intermediate) students from Maths and Biology majors to motivate and guide them for graduate studies in their respected majors.
- Apr, 2013 **Visualizing Growing Network Live** CS Dept. ODU, Norfolk - USA
Demonstrated my realtime and replayed network visualization tool called "Preserve Me! Viz" to the students of Information Visualization course.
- Oct, 2012 **Ruby on Rails - An Introduction to MVC** ODU ACM, Norfolk - USA
Presented the Model-View-Controller (MVC) application design paradigm in Ruby on Rails to the student members of ACM group.
- Apr, 2012 **Ruby on Rails - A Quick Walkthrough** ODU ACM, Norfolk - USA
Presented a quick walkthrough of Ruby on Rails to the student members of ACM group.

- Jan, 2009 **Rapid Web Development - RoR** Acharya Narendra Dev College, New Delhi - India
Presented and demonstrated rapid web application development using Ruby on Rails.
- Jun, 2008 **Kashmiri Localisation Workshop** University of Kashmir, Srinagar - India
I was a speaker at a two day workshop on Kashmiri localization where I shared my experience with Urdu localization of Linux and other software in general. I also shared some tools and guides to get started with the software localization process and motivated students to collaborate in such projects to make computing easier in their local language.
- Jun, 2008 **Rapid Web Development with Frameworks: Ruby/RoR** IPEC, Ghaziabad - India
Presented Ruby on Rails as a rapid web application development framework.
- May, 2008 **Local Language Computing** Jamia Millia Islamia, New Delhi - India
Organized a workshop and presented my Urdu GNOME Linux Desktop localization work.
- Mar, 2008 **Hindi, Kashmiri, and Urdu Localisation** Sarai, CSDS, New Delhi - India
Attended the project review meeting at Sarai where I gave feedback on Hindi localization and speech-to-text and presented my progress on Urdu GNOME Linux Desktop localization work.

Interests

Professional

Digitization and Archiving
 Web Science and Social Media Research
 Data Mining and Machine Learning
 Algorithm and Problem Solving Strategies
 Web Application and Web API Design and Development
 Software Internationalization, Localization, and Translation
 Right-to-Left (RTL) Language Research and Development
 Urdu Language Research (*including Machine Translation, Transliteration, Optical Character Recognition (OCR), Text-to-Speech, Speech-to-Text, Typography, and Linguistics*)

Community

Teaching
 Community Administration, Management, and Leadership
 Linux and Open Source Software Promotion, Development, and Support
 Crowdsourced Project Planning and Execution

Personal

Cooking
 Swimming
 Photography
 Reading and Writing Urdu Literature
 Learning from Technical and Educational Video Tutorials
 Following Technical Trends and News

Publications

Journal

Web Archive Profiling Through CDX Summarization

Sawood Alam, Michael L. Nelson, Herbert Van de Sompel, Lyudmila Balakireva, Harihar Shankar, David S. H. Rosenthal
International Journal on Digital Libraries 17.3 (Sept. 2016) pp. 223–238. 2016

Conference

Client-side Reconstruction of Composite Mementos Using ServiceWorker

Sawood Alam, Mat Kelly, Michele Weigle, Michael L. Nelson
(ACCEPTED for) Proceedings of the 17th ACM/IEEE-CS Joint Conference on Digital Libraries, 2017, Toronto, Ontario, Canada

InterPlanetary Wayback: Peer-To-Peer Permanence of Web Archives

Mat Kelly, Sawood Alam, Michael L. Nelson, Michele C. Weigle
Proceedings of the 20th International Conference on Theory and Practice of Digital Libraries, 2016, Hannover, Germany

InterPlanetary Wayback: The Permanent Web Archive

Sawood Alam, Mat Kelly, Michael L. Nelson
Proceedings of the 16th ACM/IEEE-CS Joint Conference on Digital Libraries, 2016, Newark, New Jersey, USA

MemGator - A Portable Concurrent Memento Aggregator

Sawood Alam, Michael L. Nelson
Proceedings of the 16th ACM/IEEE-CS Joint Conference on Digital Libraries, 2016, Newark, New Jersey, USA

Web Archive Profiling Through CDX Summarization

Sawood Alam, Michael L. Nelson, Herbert Van de Sompel, Lyudmila Balakireva, Harihar Shankar, David S. H. Rosenthal
Proceedings of 19th International Conference on Theory and Practice of Digital Libraries, TPDL 2015 - Research and Advanced Technology for Digital Libraries, 2015, Poznań, Poland

Improving Accessibility of Archived Raster Dictionaries of Complex Script Languages

Sawood Alam, Fateh ud din B Mehmood, Michael L. Nelson
Proceedings of the 15th ACM/IEEE-CS Joint Conference on Digital Libraries, 2015, Knoxville, Tennessee, USA

Document Compression and Ciphering Using Pattern Matching Technique

Sawood Alam
National Conference on Modern Trends in Electronics and Communication Systems, 2008, Aligarh, India

Report

Profiling Web Archives for Efficient Memento Query Routing

Sawood Alam, Michael L. Nelson, Herbert Van de Sompel, Lyudmila Balakireva, Harihar Shankar, David S. H. Rosenthal
Tech. rep. TC DL:11.2, 2015

Improving Accessibility of Archived Raster Dictionaries of Complex Script Languages

Sawood Alam, Fateh ud din B Mehmood, Michael L. Nelson
Tech. rep. arXiv:1409.1284, 2014

Support for Various HTTP Methods on the Web

Sawood Alam, Charles L. Cartledge, Michael L. Nelson

Tech. rep. arXiv:1405.2330, 2014

HTTP Mailbox - Asynchronous RESTful Communication

Sawood Alam, Charles L. Cartledge, Michael L. Nelson

Tech. rep. arXiv:1305.1992, 2013

Multiplatform Online IDE/Compiler

Sawood Alam, Neha Gautam

Tech. rep. Algorhythm'07 CSI-JMI, 2007

Other

HTTP Mailbox - Asynchronous RESTful Communication

Sawood Alam

Master's Thesis, Old Dominion University, USA, 2013

WIDE: Web Integrated Development Environment

Sawood Alam

Bachelor's Thesis, Jamia Millia Islamia, India, 2008