Alexander C. Nwala

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Website: https://alexandernwala.com/
Github: https://github.com/anwala
Updated CV (Self)

Research interests

Social Media/Computational Social Science, Web/Data Science
Web Archiving, (Local)News, NLP

Education

2020 – 2022 **Postdoctoral**, *Observatory on Social Media, Indiana University, Bloomington, Indiana*, USA
Advisor: Filippo Menczer

2014 – 2020 **Ph.D. Computer Science**, *Old Dominion University (ODU), Norfolk, Virginia*, USA
Thesis: Bootstrapping Web Archive Collections From Micro-Collections In Social Media,
Summa Cum Laude, Advisor: Michael Nelson

2012 – 2014 **M.S. Computer Science**, *Old Dominion University, Norfolk, Virginia*, USA
Thesis: Generating Combinatorial Objects - A New Perspective,
Summa Cum Laude, Advisor: Stephan Olariu

2008 – 2011 **B.S. Computer Science (Minor: Aviation Science)**, *Elizabeth City State University, Elizabeth City, North Carolina*, USA
Summa Cum Laude

Appointments

08/2022 – Present **Assistant Professor, William & Mary, Williamsburg Virginia**
08/2020 – 07/2022 **Postdoctoral Researcher, Observatory on Social Media, Indiana University**
05/2014 – 08/2020 **Research Assistant, WS-DL group, ODU**
06 – 08/2016 **Summer Fellow, Harvard Law School Library Innovation Lab**
06 – 08/2017 **Intern, The Berkman Klein Center, Harvard University**
05/2012 – 05/2014 **Research Assistant, Old Dominion University**
2009 – 2011 **Summer Intern, North Carolina Department of Transportation**

Teaching

Old Dominion University

CS 432/532 **Web Science - Spring 2018/2019**

CS 150 **Introduction to Programming with C++ - July - November 2018**
Volunteer C++ Instructor for Middle/High School Students (ages 11 - 16)

CS 333/CS 250 **Programming and Problem Solving in C++ - Fall 2014, Spring/Fall 2015**
Teaching Assistant/Lab Instructor

Elizabeth City State University

College Algebra, Linear Algebra, Calculus I/II, C++, JAVA, Data Structures/Algorithms, Computer Architecture, etc. - Spring 2009 - Fall 2011
Tutor, Department of General Education

Software/Services

- Implemented: Sumgram (Text collection summarization with most frequent conjoined ngrams)
- Implemented: StoryGraph (Real-time news Story Link Detection), Twitter Bot, Github
- Implemented: Local Memory Project (Local news collection generator), Github
- Implemented: #icanhazmemento (URL archiving Twitter-bot), Github
- Implemented: http://whatdiditlooklike.mementoweb.org/ (Twitter-bot/Visualize website yearly), Github
- Refactored: Carbon Date v2.0 (Estimates the creation date of website), Github

Computer skills

Languages	Python, C++, C#, Java, Assembly Language, PHP, JavaScript, HTML, MySQL, etc.
Technologies/APIs	Twitter API, Tumblr API, D3.js, Microsoft Kinect SDK, Weka, etc.

Scholarship/Awards

2017   **Graduate**
Outstanding Ph.D research award

2010 - 2011   **Undergraduate**
- Graduating student with the highest GPA, Academic Achievement in Computer Science Award
- Spelman College Computer Science Olympiad 2010 - 1st Place - Programming
- Advancing Robotics Technology for Societal Impact (ARTSI) 2010 Robotics competition - 2nd Place
- Rivers State Government Undergraduate Scholarship

Google Scholar

Citations: 94, h-index: 6 (at 2021-10-19): https://scholar.google.com/citations?user=LqrUey4AAAAJ&hl=en

Publications - Journals

[1] Eoin C Whelan, Alexander C Nwala, Christopher Osgood, and Stephan Olariu. Selective mutation accumulation: a computational model of the paternal age effect. *Bioinformatics*, 32(24):3790–3797, 2016.

[2] Wu He, Ashish Kshirsagar, Alexander Nwala, and Yaohang Li. Teaching information security with workflow technology–a case study approach. *Journal of Information Systems Education*, 25(3), 2014.

Publications - Refereed Conference Proceedings

[1] Christopher Torres-Lugo, Manita Pote, Alexander C Nwala, and Filippo Menczer. Manipulating Twitter Through Deletions. Submitted to ICWSM 2022, 2022.

[2] Alexander C Nwala, Michele C Weigle, and Michael L Nelson. Garbage, Glitter, or Gold: Assigning Multi-dimensional Quality Scores to Social Media Seeds for Web Archive Collections. In *Proceedings of ACM/IEEE Joint Conference on Digital Libraries (JCDL 2021)*, 2021.

[3] Dhruv Patel, Alexander C Nwala, Michele C Weigle, and Michael L Nelson. What Did It Look Like: A service for creating website timelapses using the Memento framework. In *Proceedings of ACM/IEEE Joint Conference on Digital Libraries (JCDL 2021)*, 2021.

[4] Alexander C Nwala, Michele C Weigle, and Michael L Nelson. 365 Dots in 2019: Quantifying Attention of News Sources. In *Proceedings of Computation + Journalism Symposium 2020 (CJ 2020)*, 2020.

[5] Yasith Jayawardana, Alexander C Nwala, Gavindya Jayawardena, Jian Wu, Sampath Jayarathna, Michael L Nelson, and C Lee Giles. Modeling Updates of Scholarly Webpages Using Archived Data. In *Proceedings of IEEE International Conference on Big Data (IEEE BigData 2020)*, 2020.

[6] Alexander C Nwala, Michele C Weigle, and Michael L Nelson. Using Micro-collections in Social Media to Generate Seeds for Web Archive Collections. In *Proceedings of ACM/IEEE Joint Conference on Digital Libraries (JCDL 2019)*, 2019. (**Best paper nominee**).

[7] Alexander C. Nwala, Michele C. Weigle, and Michael L. Nelson. Scraping SERPs for Archival Seeds: It Matters When You Start. In *JCDL '18: Proceedings of the 17th ACM/IEEE-CS Joint Conference on Digital Libraries*, pages 263–272, 2018.

[8] Alexander C. Nwala, Michele C. Weigle, and Michael L. Nelson. Bootstrapping Web Archive Collections from Social Media. In *HT '18: Proceedings of ACM ACM Conference on Hypertext and Social Media*, pages 64–72, 2018.

[9] Shawn M. Jones, Alexander C. Nwala, Michele C. Weigle, and Michael L. Nelson. The many shapes of Archive-It. In *Proceedings of iPres*, 2018.

[10] Grant Atkins, Alexander C. Nwala, Michele C. Weigle, and Michael L. Nelson. Measuring News Similarity Across Ten U.S. News Sites. In *Proceedings of iPres*, 2018.

[11] Alexander C. Nwala, Michele C. Weigle, Michael L. Nelson, Adam B. Ziegler, and Anastasia Aizman. Local Memory Project: Providing tools to build collections of stories for local events from local sources. In *JCDL '17: Proceedings of the 17th ACM/IEEE-CS Joint Conference on Digital Libraries*, pages 219–228, 2017.

[12] Alexander Nwala and Michael L. Nelson. A supervised learning algorithm for binary domain classification of web queries using SERPs. In *JCDL '16: Proceedings of the 16th ACM/IEEE-CS Joint Conference on Digital Libraries*, pages 237–238, 2016. (**Best Poster Award, 3rd place**).

Service

2021   **Tutorial/Workshop Chair, peer reviewer**
- Tutorial and Workshops Chair, ACM/IEEE Joint Conference on Digital Libraries
- Reviewer, ACM/IEEE Joint Conference on Digital Libraries

2020   **Journal/Conference reviewer**
- PLoS ONE
- ACM/IEEE Joint Conference on Digital Libraries

Publications - Selected Blog posts

2021-05-10   Chronicling the life-cycle of top new stories with StoryGraphBot

2020-01-20   366 dots in 2020 - top news stories of 2020

2020-09-28   My report card to my mother

2020-08-31   DNC vs RNC pulses - Quantifying news attention for the DNC and RNC with StoryGraph

2020-08-10   StoryGraph, reading the news for three years, a look at the past and the future

2020-01-04   365 dots in 2019 - top news stories of 2019

2019-09-09   Introducing sumgram, a tool for generating the most frequent conjoined ngrams

2019-06-05   Joint Conference on Digital Libraries (JCDL) 2019 Trip Report

2019-03-05   365 dots in 2018 - top news stories of 2018

2018-08-14   Revealing Data: Why We Need Humans To Curate Web Collections

2018-07-18   HyperText and Social Media (HT) Trip Report

2018-06-08   Joint Conference on Digital Libraries (JCDL) 2018 Trip Report

2018-05-04   An exploration of URL diversity measures

2018-03-04   Installing Stanford CoreNLP in a Docker Container

2017-08-27   Media Manipulation research at the Berkman Klein Center at Harvard University Trip Report

2017-06-29   Joint Conference on Digital Libraries (JCDL) 2017 Trip Report

2017-04-18   Local Memory Project - going global

2017-03-20   A survey of 5 boilerplate removal methods

2017-01-23   Finding URLs on Twitter - A simple recommendation

2016-11-16   Introducing the Local Memory Project

2016-10-26   A look back at the 2008 and 2012 US General Elections via Web Archives

2016-09-09   Summer Fellowship at the Harvard Library Innovation Lab Trip Report

2016-07-18   Tweet Visibility Dynamics in a Tweet Conversation Graph

2016-06-23   Joint Conference on Digital Libraries (JCDL) 2016 Trip Report

2016-05-31   Can I find this story? API: Yes, Google: Maybe, Native Search: No

2016-03-07   Archives Unleashed Web Archive Hackathon Trip Report (#hackarchives)

2015-07-22   I Can Haz Memento

2015-02-05   What Did It Look Like?

2014-11-14   Carbon Dating the Web, version 2.0

Selected Invited Presentations

2021-10-13   StoryGraph: quantifying the attention of news stories through near-real time story link detection , Knight Foundation Tool Demo

2021-09-28   Leveraging the domain expertise of social media users to generate seeds for web archive collections , CS Colloquium, Old Dominion University (ODU), Norfolk, VA

2021-08-28   Garbage, Glitter, or Gold: Assigning Multidimensional Quality Scores to Social Media Seeds for Web Archive Collections , ACM/IEEE JCDL 2021

2021-03-25   OSoMe Tools , Bloomington High School, Bloomington, IN

2021-02-10   365 Dots in 2018, 2019, and 2020: Quantifying Attention of News Sources , Computational + Journalism Symposium, Northeastern University, Boston, MA

2021-02-02   My Research Story/Experience , CS 800, ODU

2020-08-05   My Research Experience , Web Archiving And Digital Libraries Workshop Panel

2020-05-18   Bootstrapping Web Archive Collections From Micro-collections In Social Media , Virginia Modeling, Analysis & Simulation Center, Suffolk, VA

2020-03-26   Bootstrapping Web Archive Collections From Micro-collections In Social Media , University of Denver, Denver, CO

2019-08-21   Masters/PhD program survival guide , ODU

2019-06-04   Using Micro-collections in Social Media to Generate Seeds for Web Archive Collections , ACM/IEEE JCDL 2019, Urbana-Champaign, IL

2019-04-29   Bootstrapping Web Archive Collections From Micro-collections In Social Media , PhD Candidacy Proposal, ODU

2018-07-11   Bootstrapping Web Archive Collections from Social Media , ACM Hypertext and Social Media (HT 2018), Baltimore, MD

2018-06-05   Scraping SERPs for Archival Seeds: It Matters When You Start , ACM/IEEE JCDL 2018, Fort Worth, TX

2017-08-04   Primitive analyses for studying media manipulation , Harvard Library Innovation Lab, Cambridge MA

2017-07-27   Introduction to Programming with Python , Harvard University Skill Share, Cambridge MA

2017-06-21   Local Memory Project , ACM/IEEE JCDL 2017, Toronto ON, Canada