

ADAKU UCHENDU

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EDUCATION

Pennsylvania State University
PhD in Information Sciences and Technology

State College, Pennsylvania
August 2018 - Present

University of Maryland Baltimore County
B.S, Mathematics | Minor: Statistics
Honors: Cum Laude

Baltimore, Maryland
August 2014 - May 2018

ACADEMIC ACHIEVEMENTS

McNair Scholar
Undergraduate Research Award Scholar
Pi Mu Epsilon Mathematics Honors Society
Bunton-Waller Graduate Fellowship
Best Documentation at ATRC internship
Best Poster Presentation at ATRC internship
TTO Student Travel Scholarship

January 2016 - May 2018
March 2017 - May 2018
May 2017 - Present
August 2018 - Present
August 2019
August 2019
October 2019

RESEARCH EXPERIENCE

Pennsylvania State University
Research project: Reverse Turing Test

State College, Pennsylvania
August 2018 - Present

Research nuanced NLP techniques that can be used to build Machine Learning/Deep Learning models to distinguish human-generated from machine-generated texts. Worked on distinguishing long texts (i.e. human- and machine-generated articles) and very short-texts (i.e. human-chatbot dialogue). Currently, working on building machine-generated texts by augmenting human-generated texts, and then distinguishing these text-generators.

Autonomy Technology Research Center, Air Force Research Laboratory **Dayton, Ohio**
Research Assistant Intern

May 2019 - August 2019

Interned at the ATR Center, performing research and experiments in the field of Computer Vision and Machine Learning using Satellite dataset. Currently waiting for the results (i.e. paper and poster) from the internship to be granted public release so we can publish the results.

Federal Reserve Board
Research Project

Washington, D.C.
May 2017 - August 2018

This project required preparation of data for data analysis, extracting supporting data from database to analyze the differences between Islamic and Commercial banks. The goal is to find which bank is performing better based on the metric of how fast the finances of each bank is growing. The analysis of the data was mostly done in R and Excel which comprised of writing algorithms to conduct correlation and regression tests.

University of Maryland Baltimore County
Research Assistant

Baltimore, Maryland
February 2016 - May 2018

The research titled, “*Numerical Simulation of Vibrations of Mechanical Structures*,” aimed to mitigate the effects of earthquake on buildings by deriving the appropriate damping constant to reduce or stop building destructions during earthquakes. To achieve this, I used Matlab to solve for the natural frequency of frames and beams. It Investigated the discretization of beams and frames, Derived the mass and stiffness matrices of frames. Finally, the results were reported as my Senior Thesis.

PUBLICATIONS

Shao, J., **Uchendu, A.**, & Lee, D. (2019). "A Reverse Turing Test for Detecting Machine-Made Texts," *In 11th Int'l ACM Web Science Conf. (WebSci)*, Boston, MA, July 2019

Uchendu, A., Cao, J., Wang, Q., Luo, B., & Lee, D. "Characterizing Man-made vs. Machine-made Chatbot Dialogs," *In Conf. on Truth and Trust Online (TTO)*, London, UK, October 2019

WORK EXPERIENCES

Pennsylvania State University **Graduate Assistantship**

State College, Pennsylvania

January 2019 - Present

Work as a Teaching Assistant in a Security and Risk Analysis course that aims to educate students on how to use statistical tools to analyze their cyber-security data in R and Excel. My duties involve grading, assisting students during class activities, and holding office hours.

Hackathons **UMD Bitcamp**

Maryland

April 2017

Built a chrome extension titled, ProcrastinationStation with a team that re-routes its user to the Procrastination-Station website when Facebook is accessed. It works by providing a 30 second limit to answer 3 math questions successfully before being allowed to log onto Facebook. The goal is to discourage facebook surfing while doing school work.

HackUmbc

Built an R Shiny dashboard titled, Data Visualization. The dashboard takes in a csv file and plots a figure based on the selected column. Also, built a Study buddy website to help students form study sessions easily.

Math Lab Tutor

September 2015 - May 2018

Tutored the following courses: Pre-calculus, calculus I, Calculus II, Calculus III, Linear Algebra, Differential Equations and College Algebra.

Math Learning Assistant (LA)

August 2016 - December 2016

Assisted students in Pre-Calculus with problems they may have after Lecture. Presented the students with a weekly individual quiz and graded it. Held office hours weekly to further help the students be more successful. Attended student seminar sessions and aided students in their group quizzes.