

ADAKU UCHENDU

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EDUCATION

Pennsylvania State University

PhD in Information Sciences and Technology

Research Interests: *NLP, NLG, cybersecurity, Adversarial Robustness*

Thesis: *Reverse Turing Tests*

State College, Pennsylvania

August 2018 - Present

University of Maryland Baltimore County

B.S. Mathematics | Minor: Statistics

Honors: Cum Laude

Thesis: *Numerical Simulation of Vibrations of Mechanical Structures*

Baltimore, Maryland

August 2014 - May 2018

ACADEMIC ACHIEVEMENTS AND AWARDS

McNair Scholar

Undergraduate Research Award Scholar

Pi Mu Epsilon Mathematics Honors Society

Outstanding Tutor Award

Bunton-Waller Graduate Fellowship

Best Documentation at ATRC internship

Best Poster Presentation at ATRC internship

TTO Student Travel Scholarship

NSF SFS Scholarship

CRA-W URMD Travel Support

ACM Richard Tapia Conference Student Scholarship

Alfred P. Sloan Minority Ph.D. Scholarship

January 2016 - May 2018

March 2017 - May 2018

May 2017 - May 2018

May 2018

August 2018 - Present

August 2019

August 2019

October 2019

August 2020 - May 2023

March 2020

September 2020

January 2021 - Present

SKILLS

Programming: Python, R, Matlab, Java, LaTeX, Maple

Tools: PyTorch, Tensorflow, Keras

Applications: Git, Tableau, R Shiny

Operating Systems: Linux, Windows, MacOS

PUBLICATIONS

3. **Adaku Uchendu**, Thai Le, Kai Shu, Dongwon Lee “Authorship Attribution for Neural Text Generation” *Conf. on Empirical Methods in Natural Language Processing (EMNLP)*, Virtual Event, November 2020
2. **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
1. 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

RESEARCH EXPERIENCE

Pennsylvania State University

Research project: Reverse Turing Test

State College, Pennsylvania

August 2018 - Present

- Use nuance NLP techniques to distinguish text-generators (i.e. AI and Human).
- Work on long and short texts.
- Text generation with state-of-the-art Language Models (i.e. GPT2, GROVER, etc.).
- Currently working on other forms of Turing Tests like Authorship Attribution.

ATRC, Air Force Research Laboratory
Research Assistant Intern

Virtual
May 2020 - October 2020

- Performed research and experiments in the field of Computer Vision
- Trained Neural Networks on benchmark image datasets
- Built Bayesian models robust to white-box adversarial attacks
- Attacked models with strong white-box adversarial attacks

ATRC, Air Force Research Laboratory
Research Assistant Intern

Dayton, Ohio
May 2019 - August 2019

- Performed research and experiments in the field of Computer Vision
- Trained Neural Network on Satellite dataset
- Attacked model with a black-box adversarial attack

Federal Reserve Board
Research Project

Washington, D.C.
May 2017 - August 2018

- Data preparation on Islamic and Commercial banks data
- Data analysis on data using Excel and R

University of Maryland Baltimore County
Research Assistant

Baltimore, Maryland
February 2016 - May 2018

- Worked on research titled, “*Numerical Simulation of Vibrations of Mechanical Structures*”
- Implemented derivations in Matlab
- Findings were reported as my Senior Thesis

WORK EXPERIENCES

Pennsylvania State University
Graduate Assistantship

State College, Pennsylvania
January 2019 - May 2019

- Worked as a Teaching Assistant in a Security and Risk Analysis course.
- Assisted students on the use of Excel and R, graded and held office hours.

HACKATHONS
UMD Bitcamp

Maryland
April 2017

- Built a chrome extension named, ProcrastinationStation with a team
- It re-routes its user to the Procrastination-Station website when Facebook is accessed.

HackUmbc

- Built an R Shiny dashboard named, Data Visualization.
- The dashboard takes in a csv file and plots a figure based on the selected column.

University of Maryland Baltimore County
Math Lab Tutor

Baltimore, Maryland
September 2015 - May 2018

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