

# ADAKU UCHENDU

azu5030@psu.edu  $\diamond$  <https://adauchendu.github.io/>

## EDUCATION

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### Pennsylvania State University

Ph.D. in Information Sciences and Technology

**Thesis:** *Reverse Turing Tests*

**Advisor:** Dr. Dongwon Lee

*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*

**Advisor:** Dr. Bedrich Sousedik

*Baltimore, Maryland*

*August 2014 - May 2018*

## RESEARCH INTERESTS

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NLP, NLG, cybersecurity, Adversarial Robustness, Machine Learning, Evolutionary & Genetic algorithms

## ACADEMIC ACHIEVEMENTS AND AWARDS

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McNair Scholar

*January 2016 - May 2018*

Undergraduate Research Award Scholar

*March 2017 - May 2018*

Pi Mu Epsilon Mathematics Honors Society

*May 2017 - May 2018*

Outstanding Tutor Award

*May 2018*

Bunton-Waller Graduate Fellowship

*August 2018 - May 2020*

Best Documentation at ATRC internship

*August 2019*

Best Poster Presentation at ATRC internship

*August 2019*

TTO Student Travel Scholarship

*October 2019*

CRA-W URMD Travel Support

*March 2020*

NSF SFS Scholarship

*August 2020 - May 2023*

ACM Richard Tapia Conference Student Scholarship

*September 2020, 2021*

Alfred P. Sloan Minority Ph.D. Scholarship

*January 2021 - Present*

CRA-WP Grad Cohort for Women

*April 2021*

WiCyS Student Scholarship

*September 2021*

## SKILLS

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

**Tools:** PyTorch, Tensorflow, Keras, Transformers

**Applications:** Git, Tableau, R Shiny

**Operating Systems:** Linux, Windows, MacOS

## PUBLICATIONS

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4. [EMNLP'21] **Adaku Uchendu**, Zeyu Ma, Thai Le, Rui Zhang, Dongwon Lee, "TURINGBENCH: A Benchmark Environment for Turing Test in the Age of Neural Text Generation," *In Proceedings of the Findings of the 2021 Empirical Methods in Natural Language Processing (EMNLP)*, Punta Cana, Dominican Republic, November 2021
3. [EMNLP'20] **Adaku Uchendu**, Thai Le, Kai Shu, Dongwon Lee "Authorship Attribution for Neural Text Generation," *In Proceedings of the 2020 Conference on Empirical Methods in Natural Language Processing (EMNLP)*, Virtual Event, November 2020

2. [TTO'19] 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. [WebSci'19] 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

## INVITED TALKS

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- *Reverse Turing Tests*, at National Institute of Standards and Technology (NIST), **Applied and Computational Mathematics Division (ACMD)** Seminar Series, Virtual, May 25, 2021.

## RESEARCH EXPERIENCE

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<b>PIKE Research Lab @ Penn State</b> — <i>Research Assistant</i>	<b>State College, Pennsylvania</b>
<ul style="list-style-type: none"> <li>• <b>Research project:</b> Reverse Turing Tests</li> <li>• Advisor: Dr. Dongwon Lee</li> </ul>	<i>August 2018 - Present</i>
<b>IBM Research</b> — <i>Ph.D. Research Intern</i>	<b>San Jose, California (Virtual)</b>
<ul style="list-style-type: none"> <li>• <b>Research project:</b> AutoML for NLP</li> <li>• Mentors: Dr. Sairam Gurajada &amp; Dr. Alexandre Evfimievski</li> </ul>	<i>May 2021 - August 2021</i>
<b>ATRC, Air Force Research Laboratory</b> — <i>Research Assistant Intern</i>	<b>Dayton, Ohio (Virtual)</b>
<ul style="list-style-type: none"> <li>• <b>Research project:</b> Adversarial Robustness of Bayesian Neural Networks</li> <li>• Mentors: Christopher Menart &amp; Alexandra Hildenbrandt</li> </ul>	<i>May 2020 - October 2020</i>
<b>ATRC, Air Force Research Laboratory</b> — <i>Research Assistant Intern</i>	<b>Dayton, Ohio</b>
<ul style="list-style-type: none"> <li>• <b>Research project:</b> Reproducibility of the One-Pixel Attack</li> <li>• Mentor: Alexandra Hildenbrandt</li> </ul>	<i>May 2019 - August 2019</i>
<b>Federal Reserve Board</b> — <i>IT intern</i>	<b>Washington, D.C.</b>
<ul style="list-style-type: none"> <li>• <b>Research project:</b> Islamic vs. Non-Islamic banks</li> <li>• Mentor: Nida Davis</li> </ul>	<i>May 2017 - August 2018</i>
<b>University of Maryland Baltimore County</b> — <i>Research Assistant</i>	<b>Baltimore, Maryland</b>
<ul style="list-style-type: none"> <li>• <b>Research project:</b> Numerical Simulation of Mechanical Structures</li> <li>• Mentor: Dr. Bedrich Sousedik</li> </ul>	<i>February 2016 - May 2018</i>

## WORK EXPERIENCES

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<b>Pennsylvania State University</b>	<b>State College, Pennsylvania</b>
<b>Graduate Assistantship</b>	<i>January 2019 - May 2019</i>

- 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.

**Math Learning Assistant (LA)**

*August 2016 - December 2016*

- Assisted students in Pre-Calculus.
- Held weekly discussion sessions and Office hours.
- Presented the students with a weekly individual quiz and graded it.

**PROFESSIONAL SERVICES**

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**Journal Reviewer**

- Social Network Analysis and Mining (SNAM) *2021*
- Language Resources and Evaluation (LREV) *2021*
- Journal of Artificial Intelligence (AIJ) *2021*