

Aysha Rahman

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Education

Clark Atlanta University

Atlanta, GA

M.S. IN PHYSICS

Aug 2021 - May 2023

- Activities and Societies: AUC Data Science Club (Treasurer and Social Media Chair)
- GPA: 3.83

Agnes Scott College

Decatur, GA

B.S. IN ASTROPHYSICS, MINOR IN MATHEMATICS

Aug 27, 2015 - May 11, 2019

- Activities and Societies: Commuter Student Organization (Treasurer), Society of Physics Students (Member), Muslim Student Association (Member)
- Relevant Courses: PHY 240: Electronics, PHY 231: Intro to Data Science, CSCI 1301: Intro to Computer Science with Java

Skills

Operating Systems Windows, Linux

Programming Python, Java

Software Eclipse, Jupyter Notebook, VirtualBox, Git, Microsoft Access, Microsoft Excel, Microsoft Word, Microsoft PowerPoint, Adobe Photoshop, Adobe Illustrator, Adobe InDesign

Languages Bengali (fluent), English (fluent), Arabic (basic)

Experience

Atlanta University Center Data Science Initiative

Atlanta, GA

GRADUATE TEACHING ASSISTANT

August 2022 - December 2022

- Served as teaching assistant for the AI4ALL Discover AI course at the Atlanta University Center.
- Taught introductory Python to undergraduate students.
- Lead and graded labs on cleaning and filtering data, supervised vs unsupervised machine learning, k-means clustering, and other machine learning techniques.

Atlanta University Center Data Science Initiative

Atlanta, GA

GRADUATE STUDENT ASSISTANT

August 2022 - December 2022

- Worked as a graduate assistant for the RCMI Training for Data Science in Health Disparities course.
- Facilitated discussions, provided resources, and held office hours on Discord for a class of 30+ students ranging from graduate students to professors.

National Energy Technology Laboratory

Pittsburgh, PA (Remote)

MICKEY LELAND ENERGY FELLOW

June 2022 - August 2022

- Worked with Dr. Fan Shi at the National Energy Technology Laboratory as part of the Mickey Leland Energy Fellowship sponsored by U.S. Department of Energy's Office of Fossil Energy and Carbon Management.
- Created large XML databases of published research for use in study of plastic waste upcycling.
- Developed a data mining tool using natural language processing in Python to perform bibliometric analysis on plastic upcycling technologies.
- Created a user interface for data mining code using Tkinter and packaged program into a single executable desktop application for bibliometric analysis across various fields.

Clark Atlanta University

Atlanta, GA

TEACHING ASSISTANT

Aug 2021 - Current

- Taught and set up laboratory experiments for Physics II (Electricity and Magnetism) labs.
- Assisted laboratory instructor in managing and teaching online lab sessions as a result of COVID-19 pandemic protocols.
- Graded lab reports, received and responded to student communications, and supervised student use of lab equipment.

Scholars Education

Atlanta, GA

MATH AND SCIENCE TUTOR

Sep 2020 - Current

- Tutored middle and high school students in mathematics and algebra-based physics, resulting in a letter grade increase for students.
- Expanded responsibilities to assist center director by handling phone calls, monetary transactions with parents, and day-to-day operating tasks.

Agnes Scott College

Decatur, GA

ELECTRONICS LAB TECHNICIAN

Sep 2019 - Apr 2020

- Tested, repaired, and organized circuit components.
- Repaired, created documentation for, and optimized 3D printer for school-wide use.
- Designed and delivered a 3D printing workshop for students and professors.
- Trained and supervised student and faculty use of previously underutilized 3D printer for personal and professional use.

Energy Consulting Group

Atlanta, GA

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Sep 2018 - Feb 2019

- Compiled data and created presentations for various internal and client needs regarding IT systems and data center locations using Microsoft PowerPoint and Excel.
- Researched and created reports on current energy storage technologies.

Tutoring

Atlanta, GA

PRIVATE TUTOR IN ALGEBRA-BASED PHYSICS

Sep 2018 - Dec 2018

- Tutored high school students in accelerated algebra-based physics. Taught problem-solving strategies for basic introductory level physics.
- Worked with students to break down concepts mathematically and conceptually, such as vectors, forces, energy, and electricity.

Presentation

Modeling Attenuation of Solar Energy Through a Tree

Decatur, GA

AGNES SCOTT COLLEGE

Feb 2018 - May 2018

- Worked with advisor Dr. Amy Lovell to create a Monte Carlo simulation in C to assess the attenuation of light reaching a rooftop solar panel partially blocked by a dormant tree.
- Used VirtualBox to write and run simulations on a Linux virtual machine.
- Presented research at college's SpARC (Spring Annual Research Conference).

Observations of the 18 cm OH Lines of 23 Comets

Decatur, GA

AGNES SCOTT COLLEGE

Sep 2017 - Dec 2017

- Conducted research on comets with Dr. Amy Lovell. Ran models for and mapped comets based on observations of OH lines from the Green Bank Telescope.
- Presented poster at Georgia Regional Astronomy Meeting (GRAM).