AARON KEBEDE

www.kebede.org

aarongkebede@gmail.com

EDUCATION

Lehigh University   *August 2019 - December 2021*

B.S. Physics, Gap Year

DATA ANALYTICS SKILLS

Programming Languages	Python, Bash, C/C++, R, HTML/CSS, Java
Python Packages	Pandas, Matplotlib, Numpy, Scipy, SKlearn, Jupyter
Software & Tools	LaTeX, MS Office, Visual Studio, AWS, Linux, Slurm, CMS & LMS

RESEARCH INTERESTS & SUMMARY

An undergraduate majoring in physics, willing to work in a challenging, collaborative environment. I am deeply interested in doing research that ranges from statistical to theoretical **cosmology**. I am an effective communicator who builds positive, cohesive relationship by connecting and presenting with colleagues. Strong interpersonal skills with magnificent written and verbal communication, illustrious leadership expertise in planning, communication, decision making, delegating and problem solving.

EXPERIENCE

Physics Instructor, Technology Help Intern   February 2022 - Present

St John Baptist De La Salle Catholic School, Addis Ababa

Teaching

· Taught high school physics classes to grades 10, 11, and 12 with focus on pre-college physics topics of mechanics, optics, electromagnetism, and fluid statics.

· Devised a new way to teach at the school with hybrid online classes.

· Gave detailed notes, exercises(with solutions), and papers that were(and are still) of siginificant use to the students.

· Encouraged students to work on problems of different difficulty while also giving them projects that they would learn a lot from.

· Taught students applications of programming in physics such as python and LaTex.

Technology Help

· Help the school with maintaining school online learning.

· Actively designed and developed the school website.

· Worked with Google to enable Google Workspace for free to the school saving thousands of dollars.

· Advise and consult with school administrators in making decisions regarding the technology used at school.

Research Assistant   June 2021 - August 2021

Center for Computational Astrophysics, **Flatiron Institute**

· Worked on analyzing a suite of simulations and constraining cosmological parameters from the simulations by using their luminosity functions.

· Developed code to compute models and analyzed the data to make sense of the simulations.

· Used programs like Python along with Slurm and C to analyze large scale data.

· Developed a machine learning algorithm that took much less computational cost and time to analyze the data.

· Was able to successfully constrain the cosmological parameters to the latest scientifically accepted accuracy.

Chief Technology Officer   May 2020 - Present
CTP Ethiopia Inc.

· Designed and self-hosted a Moodle website for virtual lessons for over 450 students, completely remade the CTP Website using serverless CMS, and migrated the Moodle Data to the newly made website.
· Perform regular software updates, installations, customizations on a Linux Virtual Server
· Working on User Identity Management, Authentication, and Security using AWS Cognito and OpenID
· Plan and implement cost-effective methods to accommodate the large user base
· Serving on the Board of Directors

Undergradute Research Assistant   May 2020 - August 2020
Lehigh University

· Was part of a research team that works with an international group of scientists and engineers to map the quark-gluon plasmas phase diagram at Solenoidal Tracker at RHIC. Assisted in data analysis using ROOT by creating histograms and analyzing the results of the outcomes of collision in the Collider.
· Work on a personal project that helps drive the team forward and analyze raw data from colliders and convert it to meaningful presentations using plots and data analysis methods
· Use software such as *ROOT* with languages such as C++ and simplifying and presenting complex physics concepts every week

ACHIEVEMENTS AND AWARDS

Dean's Scholarship   *August 2019 - Present*

LEADERSHIP AND CAMPUS INVOLVEMENT

Vice President   May 2021 - May 2022
Lehigh University Society of Physics Students

Treasurer   May 2021 - May 2022
Lehigh University Mathematics and Statistics Society

Chair of Programmig   August 2021 - May 2022
Lehigh University African Students Association

Board Member   October 2019 - January 2022
Student Library Advisory Board

Executive Board Member   March 2020 - Present
CTP Ethiopia Inc.

TALKS GIVEN

Constraining Astrophysical and Cosmological Parameters using UV Luminosity Functions at z∼6   5 & 6 November, 2021
NSBP Conference, CGR Talk

Constraining Astrophysical and Cosmological Parameters using UV Luminosity Functions at Z∼6   5 August, 2021
Flatiron Institute

PROFESSIONAL ORGANIZATION MEMBERSHIPS

American Physical Society

National Society of Black Physicists

Society of Physics Students

The Ethiopian Physics Society in North America

PERSONAL PROJECTS AND COMMUNITY OUTREACH

The Physics Times   December, 2017 - Present

I founded and built a bilingual science news website where major scientific news is published. Maintains social media accounts and forums with over 7600 people currently on the network: `www.phytimes.xyz`.

The Physics Times Academy   December, 2019 - Present

I founded and built an LMS website in which high school students could use as a supplement to school. It contains learning materials like videos and notes.

LearnOTC   August 2020 - Present

Built a website along with a friend that teaches about Orthodox Tewahedo Christianity. Available at `www.learnotc.org`

Most of my other projects and contributions I made to other projects including open source can be found on my Github account at **@AaronKebede**.

PROFILE AND ADDITIONAL INFORMATION

· **Personal**

- Languages Known(varying fluency): English, Amharic, Tigrinya, Afan Oromo, Arabic, Geez, Dutch
- Personal Website(s): `www.kebede.org`, `www.phytimes.xyz/aaron`

Websites I made:

- `www.learnotc.org`
- `*.ctpethiopia.org`, including multiple subsites of varying complexities; e.g. **pod.ctpethiopia.org** & **guides.ctpethiopia.org**
- `wordpress.lehigh.edu/lumss`, `wordpress.lehigh.edu/inluttc`, `wordpress.lehigh.edu/lumss`
- `www.phytimes.com`
- `www.phytimes.xyz`
- `*.kebede.org`, inlucding multiples subsites for projects; e.g. **220.kebede.org**.
- `*.sjbdcs.org`.