

Avery Barnett

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Education and Honors

Bachelor of Arts in Physics, Technology Studies and Environmental Studies Concentration
Grinnell College

Expected May 2021
Grinnell, Iowa

- GPA: 3.75/4.0
- Marie Nesbitt Promise Prize Scholar 2020
- Selected Coursework: Environmental Chemistry, Electromagnetic Theory, PV Characterization, Imperative Problem Solving

Summer Student

Summer 2020, Summer 2018

University of the West Indies

Online

- Selected Coursework: Science, Technology and Medicine in Society, Ordinary Differential Equation, A First Course in Linear Algebra

Exchange Student

February 2020 – June 2020

Queensland University of Technology

Brisbane, Australia

- Selected Coursework: Geospatial Information System, Destructive Earth: Natural Hazards, Environmental Economics

Research Experience

CIMES Student Intern

Summer 2020, February 2021 – Present

Princeton University/ National Oceanic and Atmospheric Administration

Princeton, New Jersey

- Validated WAVEWATCH III simulations under hurricanes in shallow and deep water through comparing and contrasting model data and observed data via statistical and visual diagrams
- Formulated Python code using Jupyter Notebooks to model ocean surface wave spectra from WAVEWATCH III model data
- Received a poster award at the Society for Advancement of Chicanos/Hispanics and Native Americans in Science 2020 conference

Independent Researcher

June 2019 – August 2019

Emera Caribbean Incorporated

Bridgetown, Barbados

- Researched viability of the 100% renewable electricity across the country by 2030 alongside the Asset Management Department to be used for future purposes
- Utilized Google Earth to analyze multiple land areas around the country to calculate the renewable energy potential for each plot of land.
- Presented research in physics seminar and at the National Society of Black Physicists Conference

Independent Researcher

January 2019 – May 2019

Study of Renewable Energy, Grinnell College

Grinnell, Iowa

- Crafted an independent research project regarding the history of solar energy
- Analyzed the linkages between the uses of solar energy pre- and post-Industrial Revolution
- Interpreted literature to discuss the reasons that delayed the progression of solar technology from the point of inception

Student Researcher

January 2019 – May 2019

Environmental Chemistry, Grinnell College

Grinnell, Iowa

- Quantified the lead in dust in campus buildings to investigate trends with respect to the age of the buildings
- Obtained knowledge relating to using ICP-MS for analyzing liquid samples' molecular make-up
- Designed and presented the results to my peers and faculty on campus via a poster session

Science Experience

Student Researcher

January 2020

The Green Program, Kathmandu University

Kathmandu, Nepal

- Constructed an 18kW photovoltaic water pump to supply water to a village within rural Nepal through collaborating with other students and the Give Power Foundation
- Conducted research with fellow participants to improve the dissemination educational materials about sustainability
- Selected Coursework: Microgrids for Rural Development

Student Intern

June 2018 – August 2018

Caribbean Sustainable Energy and Innovation Institute

Kingston, Jamaica

- Worked on the University of Technology's photovoltaic system by correlating data of past weather to improve the system's capabilities
- Brainstormed and ideated cost saving initiatives to assist in the university's consumption

Science Community Leader (SCL)/Teaching Assistant
Grinnell College Physics Department

January 2018 – December 2019
Grinnell, Iowa

- Collaborated with the professor to motivate students to understand concepts in a class of approx. 30 students
- Conferred with the other teaching assistants or SCLs to explain concepts to the students and rectify any misinterpretation

Other Work Experience

Senior Interviewer

August 2020 – Present
Grinnell, Iowa

Grinnell College Admissions

- Assess the character of prospective students via interviews to understand their ability to succeed at the institution
- Conduct information sessions for prospective students and parents about the institution
- Manage and contribute to content on different social media platforms

Leadership Engagement and Curriculum Intern

January 2019 – December 2019
Grinnell, Iowa

Grinnell College Intercultural Affairs

- Created trainings and outlines for diversity and inclusion
- Promoted diversity on campus by advocating for minority groups
- Specialized in assisting students, faculty and staff to reduce discrimination on campus

Akaisiba, Self-Owned Baking Business

January 2017 – Present
Grinnell, Iowa

Co-Founder

- Bake a variety of desserts including, cheesecakes, muffins, puddings and brownies
- Initiate fundraisers to raise money for charity purposes geared towards the development of Jamaica's youth
- Donated to my high school's Home Economics Laboratory by baking and selling pastries to the students
- Conduct managerial duties such as: stocktaking, accounting, networking, sales management and multitasking

Volunteer Experience

Cultural Attaché

September 2018 - Present
Grinnell, Iowa

Grinnell College Office of International Student Affairs

- Educate students in the local community about my home country's culture
- Coordinate with classroom teachers to plan fun activities to aid in widening the global perspective of community youth

Campus Involvement

Student Representative

Working Group for Diversity in the Sciences

October 2020 – Present

- Ideate solutions to provide a safer and more equitable space for students within the sciences through reducing barriers and improving access to resources

Co-Leader (August 2019 – Present)

September 2017 – Present
Grinnell, Iowa

Black Students in STEM

- Coordinate skill workshops to assist diverse students with getting access to career resources
- Research conferences and other opportunities that members can take part in
- Provide a safe space for minority students to express themselves and the issues they may be having in classes

Vice-President (August 2019 – December 2020)

September 2017 – Present
Grinnell, Iowa

African and Caribbean Students' Union

- Ensured that all club activities comply with the college's rules and standards
- Actively built relationships across campus to include faculty, staff, and other student organizations

Social Media Coordinator (September 2018 – May 2019)

- Planned and organized ACSU events, including Kick-off events, study breaks, and senior sendoffs

Member

September 2017 – Present
Grinnell, Iowa

Gender Minorities in Physics

- Support network for gender minorities who are interested in pursuing physics

Specialized Skills

Computer Skills: Minitab, ArcGIS, QGIS, Google Earth Pro, Advanced Proficiency in Microsoft Office Suite: Excel, Word, PowerPoint, Access

Programming Skills: C and Python (Intermediate Proficiency), HTML, CSS, MATLAB and Pascal (Basic Proficiency)

Languages: English (Native), Spanish and French (Intermediate Proficiency)

Music: Steel Drum (Intermediate), Harp (Beginner), Jazz Saxophone (Alto – Beginner)