Anthony Lestone

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Education

Texas A&M University Expected August 2024

Bachelor of Science in Physics with Minors in Computer Science and Mathematics – 3.611 GPA *College Station, Texas*

Experience

Undergraduate Researcher May 2023 – present

Texas A&M Cyclotron Institute *College Station, Texas*

- Designed new silicon detector voltage signal analysis algorithms, giving rise to a substantial increase in particle identification ability over previous techniques
- Tested a new experimental technique to differentiate particles in a detector, revealing the detector's inability to distinguish between particles at desired energies
- Worked in the lab on silicon detector testing, energy calibration, vacuum chamber operation, and data acquisition
- Created C++ simulations to predict the viability of different experimental setups

Undergraduate Intern June 2021 – Aug. 2021, June 2022 – Aug. 2022

Los Alamos National Laboratory *Los Alamos, New Mexico*

- Developed particle physics simulations featured in a research publication within Physical Review Letters, the most-cited journal in the field of physics
- Processed sizable physics data sets from CERN's Large Hadron Collider by writing scripts to analyze files with 10,000,000+ data points
- Designed a C++ simulation to model the propagation and decay of subatomic particles in Earth's atmosphere
- Worked in the laboratory on detector assembly and construction of a water-based electronics cooling system

Technical Skills

Languages: C++, Python, Java
Developer Tools: Git, Vim, VSCode
Physics Software: Geant4, ROOT, PYTHIA

Honors

Aggies Invent Oct. 2021

- Collaborated with 4 other team members in a 48 hour competition to design a satellite cryocooler, placing 2nd out of 6 teams
- Created a thermodynamics simulation to estimate the power consumption of different satellite designs, demonstrating that the final design could stay within a prescribed power budget of 28 Watts

Relevant Coursework

Computational Physics, Thermodynamics, Advanced Mechanics, Nuclear Physics, Data Structures and Algorithms, Vector Calculus, Linear Algebra, Differential Equations, Electronic Circuits, Quantum Mechanics

Volunteering

Physics Festival Volunteer

- Supervised several physics demonstrations at the 2022 and 2023 Texas A&M Physics and Engineering Festivals
- Engaged with community attendees and explained physics concepts to children and adults

Science Fair Judge

- Judged projects in the high school chemistry division of the 2022 Texas Science and Engineering Fair on the basis of scientific rigor, experimental success, and quality of presentation

Science Bowl Mentor

- Prepared a team of 5 high school students for competition by reading practice questions, assisting in studying, and providing learning resources