LIA EGGLESTON

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EDUCATION

Yale University, New Haven, CT, Expected Graduation May 2022
- Bachelor of Science in Computer Science, Energy Studies Certificate; GPA: 3.54

St. Paul's School, Concord, NH, USA, Graduated Summa Cum Laude, June 2017

Relevant Coursework
- Data Structures and Programming Techniques; Algorithms; Systems Programming and Computer Organization
- Data and Information Visualization; Intelligent Robotics
- Multivariable/Vector Calculus; basic Discrete mathematics, Graph Theory and Linear Algebra

Awards/Honors: CEE-MIT Research Science Institute, Top 5 Presentations Award (2016); Finalist at the Intel International Science & Engineering Fair (2014-2015); ISEF Special Award CERN trip (2014)

EMPLOYMENT

Yale School of Public Health, New Haven, CT (October 2018-August 2020)
Software Developer for NEURON open-source simulation environment
- Implemented algorithms for 3D geometry and decreased the runtime for simulation setup by a factor of 10
- Set groundwork for replacing the outdated user interface with modern browser-based design
- Presented work on new interface at the Organization for Computational Neurosciences July 2020 Meeting

University of Wyoming Dept. of Physics, Laramie, WY (Summer 2017, Summer 2018)
Software Developer and Intern for the Fiber-fed High Resolution Echelle Spectrograph (FHiRE)
- Built an interface to control the instrument, implemented astronomy-related algorithms and graphics
- Coordinated with hardware team to set up controls, led a time-sensitive experiment during the 2017 solar eclipse

Massachusetts Department of Energy Resources, Boston, MA (Summer 2020, Remote)
Intern for the Leading by Example Program
- Conducted research and assembled databases for electric vehicle models, campus decarbonization studies, and more
- Presented results of research, contributed ideas in meetings, and helped to redesign the program website

RESEARCH EXPERIENCE

Stanford Univ. Dept. of Energy Resources Engineering, Stanford, CA (Summer 2019)
Modeling the Temperature Dynamics of a Gasoline Particulate Filter, under mentorship of Prof. Simona Onori
- Utilized machine learning techniques for dynamic modeling; researched engine systems and modern regulations

Arcetri Astrophysical Observatory, Florence, Italy (2017-2018)
Quasars as Standard Candles, under mentorship of Prof. Guido Risaliti
- Investigated cosmological models; built spectrometry software and performed statistical analysis

Co-author on publication "*Quasars as standard candles. III. Validation of a new sample for cosmological studies*"
- Lusso et. al. in Astronomy & Astrophysics, August 2020.

LEADERSHIP ACTIVITIES AND EXTRACURRICULARS

Production Manager at A Different Drum Dance Company; Yale University (2019-present)
Shift Leader at Late-Night Buttery Café, Yale University (2019-20)
English Tutor at Ringle Tutoring (2020-present)
Au pair and English teacher, Florence, Italy (2017-18)
Prefect of dorm and community leader, St. Paul's School (2016-17)
Volunteer teacher, Girls in STEM program, St. Paul's School (2016-17)

SKILLS

Programming Languages: Python, C, Javascript, HTML/CSS, Matlab, LaTeX, R
Libraries and Software: d3.js, Three.js, wx, matplotlib, ctypes, Neuron, Microsoft Office
Languages: Italian (fluent), Spanish (proficient), French (basic), Mandarin (basic)